AM471149 XU08402.X AA552116 nK05901.S AA194308 ZQ04910.S AA162548 hi29512.X AI401586 tg28912.X AI701048 WC78506.X AI151153 qC87f09.X AI151153 qC87f09.X AM057819 WC04003.X AA626773 ad09e04.S AA994799 ou54905.S AA994799 xc23408.X AR081593 xc23408.X AW081593 xc23408.X AW081593 xc23408.X

AW241292 xa54d12.x AW573033 hf30c07.x AIG10821 tp38h07.x AI799112 we98h12.x N77958 yz53f06.s1 AA936285 on75f06.s AA378091 qm63a01.x F27830 HSPD16089 H

BE856441 7f84a03.x AA137063 z102e07.s AW731656 ba56e07.x

AA045659 zk8lall.s AA100112 zl80f02.s

Title:

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 413)

Hiller,L., Lennon,G., Becker,M., Bonaldo,M.F., Chiapelli,B., Chissoes.). Dietrich,N., DuBuque,T., Favello,A., Gish,W., Hawkins,M., Portis,M., Parsons,J., Prange,C., Rifkin,L., Rohlfing,T., Schellenberg,K., Scares,M.B., Tan,F., Thierry-Meg,J., Trevaskis,E., Generation and analysis of 280,000 human expressed sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: est@watson.wustl.edu
WARNING: There is evidence that suggests that the 384-well parent
plate of this clone contains both human and mouse derived clones.
Thus, the origin of this clone is uncertain. This caution should be
kept in mind should you use this clone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA102428
zn24e05.s1 Stratagene neurocepithelium NT2RAMI 937234 Hono sapiens
cDNA clone IMAGE:548384 3' similar to gb:L13118 PYRUVATE
DEHYDROGENASE E1 COMPONENT, ALPHA SUBUNIT, SOMATIC (HUMAN);, MRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -40M13 fwd. from Amersham High quality sequence stop: 331.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97044478
Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Fas: 314 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALIGNMENTS
                                                                                                                                                                                                                                                                                                                            F27830
AA045659
AA100112
BE856441
AA137063
                                                                                                                                                                BG231955
               AA552116
AA194308
AW662548
                                                         A1401586
A1571230
A1701048
A1151153
AW057819
                                                                                                                                                                                                          T16036
AW241292
AW573033
AI610821
                                                                                                                                                                                                                                                                  AI799112
N67958
                                                                                                                                                                                                                                                                                                AA936285
AI278091
                                                                                                                                                 AA994799
                                                                                                                                                                              AI005175
                                                                                                                                                                                           AW081593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence.
AA102428
AA102428.1 GI:1647342
                                                                                                                                                               2
                                          369
415
479
560
human.
                                                                                                                                                                                                                                     271.4
271.4
271.4
271.4
271.
270.
270
270
270
270
270
270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
AA102428/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
000000000000000000000
                                                                                                                                                                                                                                                                                                                                 00000
                                                                                                                (without alignments)
2155.748 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA102428 ZD24605.5
A1306649 qm36b02.x
AA449954 ZC03h02.5
AA639493 nq90c11.3
BID29955 WC41d03.x
BEZ22568 hu48b05.x
AA993771 ot65h04.5
AIS3781 gC293d05.x
AA614036 no82507.5
AIS3292 qu13f08.x
AA6687297 not1b08.x
AA6687297 not1b08.x
AA6687297 coe82c07.s
AA647355 coe82c07.x
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           M313205 qp87b02.x
BE672988 7d26c06.x
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                        273
1 ctaccacatctactccagcg.....agatgaattattgagtgctt 273
                                                                                                August 16, 2002, 11:42:35; Search time 1709.23 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
          GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                               13736207 seqs, 6748477542 residues
                                                                                                                                                                                                                                                                                          hits satisfying chosen parameters:
                                                                                                                                                        US-09-761-579-2_COPY_1200_1472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                      nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA102428
AA1306649
AA1396549
AA639493
AI799955
BEZZZE68
AA6393771
AA6433781
AA6423781
AA647297
AA647297
AA647297
AA647297
AA647297
AA67297
AA67297
AA67297
AA67297
AA67297
                                                                                                                                                                                                                  IDENTITY_NUC Gapoxt 1.0
                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                        length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          em_gss_hum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_gss_pln:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     em_gss_vrt:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ......
                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_esthum: em_estin: em_estin: em_estov: em_estpl: em_estpl: em_estpl: em_estpl: em_en_estpl: em_estpl: em
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gb_est1:*
gb_est2:*
gb_htc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                             em_estba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a:es6_q6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10:
112:
14:
16:
                                                                                                                                                                                                                                                                                           oŧ
                                                                                                                                                                                                                                                                                                                         sed
                                                                                                                                                                          Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              al number
                                                                                                                                                                                                                                                                                                                      8 B
                                                                    OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                              ••
                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                             Database
                                                                                                                                                                                                                                                                                                                      Minimum
                                                                                                                                                                                                                                                                                                                                       Maximum
                                                                                                Run on:
```

FEATURES

AI459848 ar82h11.x AI185025 qe35a06.s AA552122 nk05908.s

Result

š

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

```
Seq primer: -40UP from Glbco High quality sequence stop: 3 Location/Qualiflers
                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                         107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human.
                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Simil
Matches 273; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA149954/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
               CDNA Library Preparation: M. Bento Soares, Ph.D.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LiML at:
www-blo.llnl.gov/Dbrp/image/image.html
Insert Length: 588 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 01-FEB-1999
                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. I (bases 1 to 424)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A1306649

424 bp mRNA linear EST 01-FEB-19:
qn36b02.xl NCI_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1900299 3'
similar to qb:L13318 PYRUVATE DEHYDROGENASE El COMPONENT, ALPHA
SUBUNIT, SOMATIC (HUMAN);, mRNA sequence.
A1306649.1 GI:3989720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tumor Gene Index
Unpublished (1997)
Context: Robert Strausberg, Ph.D.
Emall: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael
Emmert-Buck, M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gtttaagtcagtcagttaaggggaggaggaggagagggttataccttcagggggctaccag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    221 GTTTAAGTCAGTCAGTTAAGGGGAGGAGAAGGAGGGTTATACCTTCAGGGGGCTACCAG 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acagtgttctcaacttggttaaggaagaagaaacccagtcaatgaaattcaatgaaatt 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161 ACAGTGTTCTCAACTTGGTTAAGGAGGAAGAAACCCAGTCAATGAAATTCAATGAAATT 102
                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                       100.0%; Score 273; DB 9; Length 413; 100.0%; Pred. No. 1e-67; Live 0; Mismatches. 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            atches 273; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                              105
                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                               est Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AI306649/c
LOCUS
                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ... ESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
```

q

ö

g

ð

a

ò

g õ

ð

```
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 454)

Chissoe, S., Liennon, G., Becker, M., Bonaldo, M.F., Chiapelli, B., Chissoe, S., Dietrich, N., Dubuque, T., Favello, A., Gish, W., Hawkins, M., Hultman, M., Rucaba, T., Lacy, M., Le, M., Le, N., Mardis, E., Moore, B., Morris, M., Parsons, J., Prange, C., Riffin, L., Rohlfing, T., Schellenberg, K., Soares, M.B., Tan, F., Thierry-Meg, J., Trevaskis, E., Undervood, K., Wohldmann, P., Waterston, R., Wilson, R. and Marra, M. Generation and analysis of 280,000 human expressed sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA149954 tratagene colon (#937204) Homo sapiens cDNA clone IMAGE:566643 3' similar to gb:L13318 PYRUVATE DEHYDROGENASE E1 COMPONENT, ALPHA SUBUNIT, SOMATIC (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                          104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ctaccacatctactccagcgacccaccttttgaagttcgtggtgccaatcagtggatcaa 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGE:1900299"
/clone_11b="NOI_CGAP_K1d5"
/tissue_type="2 pooled tumors (clear cell type)"
/lab.host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                        Score 273; DB 9; Length 424;
Pred. No. 1e-67;
0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97044478
Contact: Wilson RK
Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 ttagtgcattaaaagatgaattattgagtgctt 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43 TTAGTGCATTAAAAGATGAATTATTGAGTGCTT 11
/organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA149954.1 GI:1721168
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
```

```
Tissue Procurement: Ilan Kirsch, M.D., Michael R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
A1799955/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                           /organism="Homo sapiens"
/organism="Homo sapiens"
/db_xref="GDB:453096"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone=lib="Stratagene colon (#937204)"
/tissue_type="tunor"
/cell_lihe="repe="tunor"
/cell_lihe="tunor"
/cell_lihe="repe="tunor"
/cell_lihe="repe="tunor"
/cell_lihe="repe="tunor"
/cell_lihe="repe="tunor"
/cell_lihe="repe="tunor"
/cell_lihe="repe="tunor"
/cell_lihe="repe="tunor"
/cell_lihe="tunor"
/cell_lih
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ng90c11.81 NCI_CGAP_CO9 Homo saplens CDNA linear EST 23-OCT-1997 almilar to 9b:L13318 PYRUVATE DEHYDROGENASE E1 COMPONENT, ALPHA AA639493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. I (bases I to 456)
NCI-GCAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP), Unpublished (1997)
                  Tel: 314 286 1800
Fax: 314 286 1810
Fax: 314 286 1810
Fmail: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -40Ml3 fwd. from Amersham
High quality sequence stop: 376.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 273; DB 9;
100.0%; Pred. No. 1.1e-67;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D. Email: cgapbs-rémail.nih.gov
                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            76 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA639493.1 GI:2563272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.0
Matches 273; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human.
                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
AA639493/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
```

```
1..456

/Organism="Homo sapiens"
/Organism="Homo sapiens"
/Organism="Homo sapiens"
/Organism="Homo sapiens"
/Clone="Inh="NCI_CGAP_CO9"
/Lissue_Lype="Colon tumor RER+"
/Lab_host="DH10R"
/Inbc="Organ: colon; Vector: pT773D-Pac (Pharmacia) with a modified polylinker; list strand cDNA was prepared from RER+ colon tumor, and was then primed with a Not I - oligo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pr773 vector. Library is not normalized. Library was constructed by Bento Soares and M. Fatima Bonaldo (Soares4
                         CDNA Library Preparation: M. Bento Soares, Ph.D.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington Giversity Genome Sequencing Center
Clone distribution: NCI-CGAP Clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
WWW-bio.lnnl gov/Dbrp/Image.html
Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 424.
  M.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AI799955 WC1_CGAP_PT28 456 bp mRNA linear EST 17-DEC-1999 WC41d03.x1 NCI_CGAP_PT28 Homo sapiens cDNA clone IMAGE:2221189 3' similar to gb:L13318 PYRUVATE DEHYDROGENASE El COMPONENT, ALPHA AI799955. SONATIC (HUMAN); mRNA sequence, AI799955.1 GI:S365427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostom1;
Homo.
Emmert-Buck,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 456)
NCI-CGAP http://www.ncbi.nlm.nlh.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 acagigitoicaactiggitaaggaggaagaaaacccagicaaigaaaitcaaigaaati 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 456;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match

100.0%; Score 273; DB 9;
Best Local Similarity 100.0%; Pred. No. 1.1e-67;
Matches 273; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           144 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 ttagtgcattaaaagatgaattattgagtgctt 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            76 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 c
```

Center n can be

FEATURES

```
/Glone="IMAGE:3173265"
/clone=lib="NCI_CGAP_Brn41"
/tissue_type="oligodendroglioma"
/tab_host="Dilgodendroglioma"
/lab_host="Dilgodendroglioma"
/lab_host="Dilgodendroglioma"
/lab_host="Dilgodendroglioma"
/lab_host="Dilgodendroglioma"
/note="Organ: brain; Vector: pT7T3D-Pac (Pharmacia) with a modified polylloker; Site_1: Roft=2: EcoRI: lst
strand cDNA was primed with a Not! Site_2: EcoRI: lst
strand cDNA was ligated to Eco RI adaptors
(Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified approxy vector. Library
constructed and normalized by Bento Soares and M.Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA993771 478 bp mRNA linear EST 27-AUG-1998 ot65h04.s1 Soares_testis_NHT Homo sapiens CDNA clone IMAGE:1651687 3' similar to gb:Li13318 PYRUVATE DEHYDROGENASE E1 COMPONENT, ALPHA AA993771
                                                                                                                                                                                                                                              CDNA Library Arrayed by: The I.M.A.G.E. Consortium/LLNL DNA Sequencing by: Washington University Genome Sequencing Cente: Clone distribution: NCI-CGAP clone distribution information can found through the I.M.A.G.E. Consortium/LLNL, send email to: Info@image.llnl.gov
Seq primer: -40UP from Gibco.
                 1 (bases 1 to 463)
MCI/MINS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
MCI/MINS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
MCI/MINS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP-MTGAP), Tumor Gene Index
Unpublished (1998)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Robert Jenkins, M.D.
cDNA Library Preparation: M. Bento Soares, Ph.D. and M.Fatima Bonaldo, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 acagtgttctcaacttggttaaggaggaagaaacccagtcaatgaaattcaatgaaatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tch 100.0%; Score 273; DB 9; Length 463; al Similarity 100.0%; Pred. No. 1.1e-67; 273; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            150 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 ttagtgcattaaaagatgaattattgagtgctt 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       76 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA993771.1 GI:3180316
                                                                                                                                                                                                                                                                                                                                                                                               .463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     114
                                                                                                                    JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
AA993771/c
                                      AUTHORS
                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42
                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                   Email: cgapbs-remaining of the property of the property of the procurement: Michael J. Brownstein, M.D., Ph.D., Michael R. Emmert-Buck, M.D., Ph.D., Ph.D., Ph.D., Ph.D., Ph.D., Ph.D., Ph.D., Dh.D., Ph.D., DNA Sequencing by: Greg Lennon, Ph.D., DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-GGAP clone distribution: NCI-GGAP clone distribution: NCI-GGAP clone distribution: NCI-GGAP clone distribution: M.G. E. Consortium/LLNL at: www-bio.llni.gov/bbrp/image/image.html
Insert Length: 606 Std Error: 0.00
Seq primer: -400P from Glaboo.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note-*Organ: prostate; Vector: pT7T3D-Pac (Pharmacia)
with a modified polylinker; plasmid DNA from the
normalized library NI_CGAP_PI22 was prepared, and ss
circles were made in vitro. Following HAP purification,
this DNA was used as tracer in a subtractive hybridization
of 5,000 clones made from the same library (clonens pool
985608-986759, 1101192-1101959, and 1217928-1220615),
subtraction by Bento Soares and M. Fatima Bonaldo. "
120 c 75 g 149 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                hu48b05.x1 NCI_CGAP_Brn41 Homo sapiens cDNA clone IMAGE:3173265 3'
similar to gb:L13318 PYRUVATE DEHYDROGENASE E1 COMPONENT, ALPHA
BE222568
BE222568.1 GI:8909886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 gittaagicagicagitaaggggaggaggaggaggagggtiataccitcaggggggtaccag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 273; DB 9; Length 456; 100.0%; Pred. No. 1.1e-67; 1ve 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:2321189"
/clone_lib="NCI_CGAP_Pr28"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .456
/organism="Homo sapiens"
/db_xref="taxon:9606"
                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
Bukaryota; Metazoa; Chordata;
Mammalia; Butheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                        /dev_stage="adult"
/lab_host="DH10B"
  Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 100.
Matches 273; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                 source
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
BE222568/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
```

ò g ò 셤 ò

õ 셤 ò q

ö

Gaps

ORGANISM

REFÉRENCE

JOURNAL AUTHORS TITLE

ATURES

```
485 bp mRNA linear EST 18-FEB-1998 po82c07.81 NCI_CGAP_AA1 Homo sapiens cDNA clone IMAGE:1113324 3' similar to gb:Li3318 PYRUVATE DEHYDROGENASE E1 COMPONENT, ALPHA SUBGNIT, SOMATIC (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note-Torgan: uterus; Vector: pT7T3-Pac; Site_1: Not I; Site_2: Eco RI; ist strand cDNA was primed with a Not I Site_2: Eco RI; ist strand cDNA was primed with a Not I oligo(dT) primer [5' correct representation of the Not Gonble-stranded cDNA was ligated to Eco RI adaptors and Eco RI sites of the modified pT7T3 vector. Library went tricugh one round of normalization. Library constructed by M. Fatima Bonaldo. constructed by M. Fatima Bonaldo. constructed by M. Fatima 151 t lothers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo saplens
Bukaryota Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 484)
NCI-GGAP http://www.ncbl.nlm.nih.gov/ncicgap.
NCI-GGAP http://www.ncbl.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
National Cancer Institute,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: cgapbs:r@mail.nih.gov
Email: cgapbs:r@mail.nih.gov
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 543 std Error: 0.00
Seq primer: -400P from Gibco
High quality sequence stop: 447.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 484;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .484
/organism="Homo sapiens"
/db_xref="taxon:9606"
/dlone="IMAGE:2042121"
/clone="IMAGE:2042121"
/clone_lib="Soares_pregnant_uterus_NbHPU"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100.0%; Pred. No. 1.1e-67;
Matches 273; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev_stage="adult"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="female"
AI493781
AI493781.1 GI:4394784
                                                                                                                                                                                                                                                   Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                           human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA614036/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                       ORGANISM
                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                        JOURNAL
                            VERSION
KEYWORDS
SOURCE
     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  윰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center

DNA Sequencing by: Washington University Genome Sequencing Center

DNA Sequencing by: Washington University Genome Sequencing Center

Clone distribution: NCI-CGAP Chose distribution information can be

Clone distribution: NA.G.E. Consortium/LLNL at:

Www-bio.lini.gov/bbrp/Amage/Amage.html

www-bio.lini.gov/bbrp/Amage/Amage.html

Insert Length: 771 Std Error: 0.00

Insert Length: 771 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A1493781 484 bp mRNA linear EST 18-WAR-1999 4293405.x1 Soares_pregnant_uterus_NDHPU Homo sapiens cDNA clone INAGE:2042121 3' similar to gb:L13318 PIRUYATE DEHYDROGENASE E1 COMPONENT, ALPHA SUBUNIT, SOMATIC (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                        Tumor Gene Index
Tumor Gene Index
Tumobulished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
CDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima Bonaldo
                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 478) NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap. NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap. National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 478;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 273; DB 9;
100.0%; Pred. No. 1.1e-67;
Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sex-"male"
/lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 100.
Matches 273; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
```

BASE COUNT ORIGIN

LOCUS A1493781/c

음 à

õ g õ

Š

ð

```
SUBUNIT, SOMATIC (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                   source
                                                         ORGANISM
                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                           VERSION
KEYWORDS
SOURCE
                 ACCESSION
                                                                                     REFERENCE
                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ō,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                         ô
                            Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 485)
NCI-CGAP http://www.ncbi.nlm.nlh.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                CDNA Library Preparation: Stratagene, Inc., David B. Krizman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 gittaagicagicagitaaggggaggaggaaggaggitaiaccticaggggggtaccag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ctaccacatctactccagcgacccaccttttgaagttcgtggtgccaatcagtggatcaa 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs_r@mail.nih.gov
Tissue Procurement: L. Jeffrey Medeiros, M.D., Michael R.
Emmert-Buck, M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 485;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                    cDNA Library Arraying: Greg Lennon, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                           / Match 100.0%; Score 273; DB 9; Local Similarity 100.0%; Pred. No. 1.1e-67; les 273; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                         150 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                        83 g
  GI:2466170
                                                                                                                                                                                                                                                                                                                                                                               1.6 kb.
                                                                                        Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                        129 c
                                                                                                                                                                                                                                                                                                                                                                                        123
                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AI283292/C
LOCUS
DEFINITION
                            ORGANISM
                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
VERSION
KEYWORDS
                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
                                                                                                                                                                                                                                                  FEATURES
                                                                             TITLE
                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
```

A1283292 495 bp mRNA linear EST 23-NOV-1998 qullf08.xl NCI\_CGAP\_Ov23 Homo sapiens cDNA clone IMACE:1964679 3' similar to gb:Ll3318 PYRUVATE DEHYDROGENASE El COMPONENT, ALPHA

```
Adlight dates institute, cancer Genome Anatomy Project (CGAP),
Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
www-bio.lhl.gov/bbrp/image/image.html
Seq primer: -40UP from Gibco
High quality sequence stop: 374.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                     Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA687297 497 bp mRNA linear EST 24-DEC-1997 nv61b08.sl NCI_CGAP_GCB1 Homo sapiens CDNA clone IMAGE:1234263 3' similar to gb:Li3318 PYRUVATE DEHYDROGENASE El COMPONENT, ALPHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Organ: ovary: Vector: pCMV-SPORT6; Site_1: Sall; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.35 kb. Tumor types include: mixed Mullerian tumor, papillary serous, clear cell, spindle cell. All are primary tumors, metastasis positive. Life Technologies catalog #: 11534-013"
                                                                                                                                                                 NCI-CGAP http://www.ncbl.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 acagigitoicaactiggitaaggaggaagaaacccagicaaigaaaitcaaigaaati 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:9606"
/clone="TAXOn:964679"
/clone=lib="NCI_CGAP_Ov23"
/tissue_type="tumor, 5 pooled (see description)"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 495;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ouery Match 100.0%; Score 273; DB 9; I
Best Local Similarity 100.0%; Pred. No. 1.1e-67;
Matches 273; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              147 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 06
AI283292.1 GI:3921525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 136 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
AA687297/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
```

```
Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostom1;

Eukaryota; Metazoa; Chordata; Catarrhin1; Hominidae; Homo.

Mammalla: Eutheria; Primates; Catarrhin1; Hominidae; Homo.

Mammalla: Eutheria; Primates; Catarrhin1; Hominidae; Homo.

Mational Cancer institute, Cancer Genome Anatomy Project (CGAP),

Tumor Gene Index

AL Unpublished (1997)

Contact: Robert Strausberg, Ph.D.

Contact: Machallinin.gov

Email: Capaba-rémail.inin.gov

Email: Capaba-rémail.inin.gov

Email: Capaba-rémail.inin.gov

Empert Leuck M.D., Ph.D.

CDNA Library Preparation: Stratagene, Inc.

CDNA Library Preparation: Stratagene, Ph.D.

CDNA Library Preparation: Stratagene, Ph.D.

CDNA Library Preparation: Stratagene, Inc.

CDNA Library Ph.D.

CDNA Library Preparation: Stratagene, Inc.

CDNA Library Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/organism="Homo sapiens"
/ob_xref="taxon:9606"
/clone="IMAGE:1418124"
/clone=lib="NCI_CGAP_CG12"
/sex="mixed"
/tissue_type="colon tumor"
/lab_host="SoloR (kanamycin resistant)"
/note="Organ: colon, Vector: Bluescript SK-; Site_1: EcoRI
/note="Organ: colon, Vector: Bluescript SK-; Site_1: EcoRI
/note="Organ: colon, vector: Bluescript SK-; Site_1: CoRI
/note="Organ: colon tumors: 5' adaptor sequence: 5'
GAATTCGGCACGAG 3' 3' adaptor sequence: 5'
CTCGAGTTTTTTTTTTTTTTT 3' Average insert size: 1.2 kb."
27 a 132 c 95 g 149 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     similar to gb:L13318 PYRUVATE DEHYDROGENASE E1 COMPONENT, ALPHA SUBUNIT, SOMATIC (HUMAN);, mRNA sequence.
AA847355
Ag847355.1 GI:2933873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 503;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 273; DB 9;
100.0%; Pred. No. 1.1e-67;
:ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     512 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.0
Matches 273; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AI313205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
A1313205/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                      SOURCE
                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                                                                                                                                                JOURNAL
                                                             ACCESSION
                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA847355 503 bp mRNA 11near EST 31-MAR-1998 oe82c07.s1 NCI_CGAP_Co12 Home sapiens cDNA clone IMAGE:1418124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 497)
NCI-CGAP http://www.ncbi.nlm.nlh.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 497;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone='INAGE:1234263"
/clone_lib='NCI_CGAP_GCB1"
/tissue_type="germinal center B cell"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                           Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Insert Length: 800 Std Error: 0.00
Seg primer: -40m13 fwd. Er from Amersham
High quality sequence stop: 441.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 273; DB 9;
100.0%; Pred. No. 1.1e-67;
Live 0; Mismatches 0;
                               SUBUNIT, SOMATIC (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                              AA687297.1 GI:2675488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 100.
Matches 273; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                        . .497
                                                                                                                                                                                                                                                               Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          118
                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
AA847355/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                               ORGANISM
                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                           ATURES
                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
```

Gaps

ö

03-FEB-1999

```
REFERENCE
                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                            Homo sapiens

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

I (Dases 1 to 512)

NCI-CGAP http://www.ncbi.nlm.nlh.gov/ncicgap.

NAIOnal Cancer Institute, Cancer Genome Anatomy Project (CGAP),

Tumor Gene Index

Unpublished (1997)

Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                   Email: cgapbs-remail.nih.gov
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 855 Std Error: 0.00
Seq primer: -400P from Glbco
High quality sequence stop: 382.
               E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 acagtgttctcaacttggttaaggaggaagaaaacccagtcaatgaaattcaatgaaatt 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 183 ACGGGTCTCCAACTTGGTTAAGGAGGAAGAAAACCCAGTCAATGAAATTCAATGAAATT 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qp87b02.xl Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone
IMAGE:1929963 3' similar to gb:L13318 PYRUVATE DEHYDROGENASE
COMPONENT, ALPHA SUBUNIT, SOMATIC (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 512;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                              1. 512
/organism="Homo sapiens"
/db_xref="texon:9606"
/clone="IMAGE:1929963"
/clone_1lb='Soares_fetal_lung_NbHL19W"
/dev_stage="19 weeks"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 273; DB 9;
100.0%; Pred. No. 1.1e-67;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                165 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AI313205.1 GI:4018810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 100. Matches 273; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                128
                                                                                    human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                      VERSION
KEYWORDS
SOURCE
ORGANISM
 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                    AUTHORS
TITLE
                                                                                                                                                                                           JOURNAL
                                         ACCESSION
                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                       LATURES
                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                윤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

RESULT 14 BE672988/c

```
Contact: Robert Strausberg, Ph.D.

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-rémail.nih.gov
Tissue Procurement: Michael J. Brownstein, M.D., Ph.D., Michael R.

Emert-Buck, M.D., Ph.D.

CDNA Library Preparation: M. Bento Soares, Ph.D.

CDNA Library Preparation: M. Bento Soares, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center

Clone distribution: NCI-CCAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL, send email to:

Info@image.llnl.gov
Seq primer: -40UP from Gibco
High quality sequence stop: 460.
7d26c06.x1 NCI_CGAP_Pr28 Homo sapiens CDNA clone IMAGE:3248362 3' similar to gb:L13318 PYRUVATE DEHYDROGENASE E1 COMPONENT, ALPHA SUBUNIT, SOMATIC (HUMAN);, mRNA sequence.
BE672988 G1:10033529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gdv_stage="adult"
//dev_stage="adult"
//dev_stage="adult"
//dev_stage="bull0"
//dev_s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.
1 (bases 1 to 519)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 gtttaagtcagtcagttaagggggaggaggaggaggggttataccttcaggggggtaccag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acagtgttctcaacttggttaaggaggaagaaacccagtcaatgaaattcaatgaaatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 519;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 100.0%; Score 273; DB 10; Best Local Similarity 100.0%; Pred. No. 1.1e-67; Matches 273; Conservative, 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="IMAGE:3248362"
/clone_lib="NCI_CGAP_Pr28"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           91 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               128
                                                                                                                                                                                                                                                                                                                                                                         uman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
```

241 ttagtgcattaaaagatgaattattgagtgctt 273 | ttagtgcattaaaagatgaattaiiiiiiiiiii 40 TTAGTGCATTAAAAGATGAATTATTGAGTGCTT 8

```
Search completed: August 16, 2002, 13:08:49 Job time: 5174 sec
                                                 g
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                Homo saplens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 537)
2 (bases 2 to 537)
2 (bases 3 to 537)
2 (bases 3 to 537)
2 (bases 3 to 537)
3 (bases 3 to 537)
3 (bases 4 to 537)
3 (bases 4 to 537)
3 (bases 4 to 547)
4 (bases 5 to 547)
4 (bases 5 to 547)
4 (bases 5 to 547)
4 (bases 6 to 547)
4 (bases 7 to 547)
4 (bases 6 to 547)
4 (bases 7 to 547)
4 (bas
                                                                                              EST 09-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Wilson RK
Contact: Wilson RK
Washington University School of Medicine
Washington University School of Medicine
Washington University
Tel: 314 286 1800
Fax: 314 286 1810
Fax: 314 286 1810
Fax: 314 286 1810
Fax: 314 286 1810
Fax: 314 280 1810
INAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -40UP from Gibco
Seq primer: -40UP from Gibco
INAGE Consortium (info@image.llnl.gov) for further information.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                           A1459848 Barstead colon HPLRB7 Homo sapiens cDNA clone ar82h11.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:2151813 3' similar to gb:L13318 PYRUVATE DEHYDROGENASE E1 COMPONENT, ALPHA SUBGNIT, SOMATIC (HUMAN);, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 100.0%; Score 273; DB 9; Length 537; Best Local Similarity 100.0%; Pred. No. 1.1e-67; Matches 273; Conservative 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.537
/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:2151813"
/clone_lib="Barstead colon HPLRB7"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95 9
                                                                                                                                                                                                                                           A1459848
A1459848.1 GI:4312729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Barstead.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    133
                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                  MI459848/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                 RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      å
```

Appli Appli Appli Appli Appli Appli Appli Appli

Sequence Seq

Sequence Sequence Sequence

```
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/232,463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: DORNER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: FALKNER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
CORRESPONDENCE: 52
CORRESPONDENCE ADDRESS:
US-08-280-228-1

US-08-960-022-1

US-08-310-356-36

PCT-US92-05300-1

US-08-731-722-4

US-08-731-722-4

US-08-731-722-1

US-08-731-722-2

US-08-731-722-2

US-08-731-722-2

US-08-731-722-3

US-08-731-722-3

US-08-731-722-3

US-08-93-359-21

US-08-93-359-21

US-08-903-359-21

US-08-903-359-21

US-08-903-359-21

US-08-902-684-8

US-09-020-685-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
APPLICATION NUMBER: EP 91 114 300.6
FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: BERY. SEEPHEN A.
RECISTRATION NUMBER: 29.768
RECISTRATION NUMBER: 30472/114 IMMU
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Foley & Lardner
STREEF: 1800 Diagonal Road, Suite 500
CITY: Alexandria
STATE: VA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Sequence 14, Application US/08232463
; Patent No. 5670367
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPALIBLE
OPERATING SYSTEM: PC-DOS/MS-DX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECANO 149
TELEX: 899149
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
TENGTH: 7218 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; CLONE: pTZgpt-F1s
US-08-232-463-14
                                                                  4.00.1

100.3

100.3

100.3

100.2

100.2

100.2

100.2

100.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: 11ne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-232-463-14/C
   August 16, 2002, 11:49:05 ; Search time 46.68 Seconds (without alignments) 1436.546 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 14, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              App]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                US-09-761-579-2_COPY_1200_1472
273
1 ctaccacatctactccagcg.....agatgaattattgagtgctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sedinence Sedine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1: /cgg2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/FD_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/FD_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/FD_TOMB.seq:*
                    GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-978-456-7
US-09-225-967-7
US-09-227-806-7
US-09-227-806-7
US-09-491-916-5
US-08-676-974-2
US-08-676-974-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-820-170A-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               383533 seqs, 122816752 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                            - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                               IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          $
Query
Match Length I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 111.55 11
                                                                                                                                                                                                                                                                                                                                   Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                               OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š.
```

g

Q ŏ g ò

ò

```
APPLICANT: Desmaze, Chantal
APPLICANT: Methor, Thomas
APPLICANT: Methor, Thomas
APPLICANT: Peter, Martine
APPLICANT: Plocugastel, Beatrice
APPLICANT: Plocugastel, Beatrice
APPLICANT: Thomas, Gilles
APPLICANT: Thomas, Gilles
APPLICANT: Thomas, Gilles
APPLICANT: Transles
TITLE OF INVENTION: CHROMOSOME 22 INVOIVED IN RECURRENT CHROMOSOMAL
TITLE OF INVENTION: TRANSLATIONS ASSOCIATED WITH THE DEVELOPMENT OF CANCEROUS
TITLE OF INVENTION: TRANSLATIONS ASSOCIATED WITH THE DEVELOPMENT OF TRANSLOCATIONS
TITLE OF INVENTION: TRANSLOCATIONS
TITLE OF INVENTION: TRANSLOCATIONS
THANSLOCATIONS
THANSLOCATIONS
TOWNS AND MICHELE ACIDS OF FUSION RESULTING FROM SAID
THILE OF INVENTION: TRANSLOCATIONS
CORRESPONDENCE ADDRESS: 129
CORRESPONDENCE ADDRESS: 129
                                                                                                                                                                                                                                                       147 gaagaaaacccagtcaatgaaattcaatgaaattctggaaacttccattaagtgtgtag 206
                                                                                                                                                                                                                                                                                                     73 GTATAAAAACCTGCCTTTGTAAATGTAAGAAAATATTGGGTATATACTTTGGATGAATGG 132
                                                                                                                                                                                                              ö
                                                                                                                                                         Score 31.6; DB 2; Length 394;
Pred. No. 0.47;
0; Mismatches 49; Indels (
                                                                                                                                                                                                                                                                                                                                                      207 attgagcaggtagtaattgcatgcagtttgtacattagtgcattaaaaga 256
                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature

10CATION: 350.394

OTHER INFORMATION: /note= "Nucleotides 350.394 are

OTHER INFORMATION: unique flanking sequence"

US-08-623-906A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TIPE: ILOPPY ALSA
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: AEDIT 1.0 DOS text editor
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/343,443B
FILING DATE: 18-NOV-1994
CLASSIFICATION NUMBER: PCT/FR93/00494
FILING DATE: 19-MAY-1993
PRIOR APPLICATION DATA:
FILING DATE: 19-MAY-1993
FILING DATE: 20-MAY-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Welser, Gerard J. REGISTRATION NUMBER: 19,763 REGISTRATION NUMBER: 989.6121P TELECOMUNICATION INFORMATION: TELECOMUNICATION: 215-875-8383 TELEFAX: 215-875-8384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Weiser & Associates
STREET: 230 South Fifteenth Street
CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 3, Application US/08343443B
Patent No. 5968734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Aurias, Alain
Delattre, Olivier
Desmaze, Chantal
Melot, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                        11.6%; initarity 55.5%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 2938 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE: PA
COUNTY: USA
ZIP: 19102
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic acid
                                                                                                                                                                                               Best_Local Similarity
Matches 61; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-343-443B-3/c
                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                            ö
                                                                                                                                                                                                                                                                                                                                                           150 gaaaacccagtcaatgaaattcaatgaaattcttggaaacttccattaagtgtgtagatt 209
                                                                                                                                                                                                                      90 aggagaggttataccttcagggggctaccagacagtgttctcaacttggttaaggaggaa 149
                                                                                                                          Gaps
                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Stevenson, Tamara
APPLICANT: Stevenson, Tamara
APPLICANT: Dyorak, Jan
APPLICANT: Halverson, Joy
TITLE OF INVENTION: Microsatellite Sequences for Canine
TITLE OF INVENTION: Genotyping
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
ADDRESSEE: FLEHK, HOHBACH, TEST, ALBRITTON & HERBERT
STREET: A Embarcadero Center, Sulte 3400
CITY: San Francisco
STATE: CA
                              Length 7218;
                                                                                                                                                                                                                                                                                                                                                                                                              gagcaggtagtaattgcatgcagtttgtacattagtgcattaaaagatgaa 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
LOCATION: 234..349
LOCATION: 234..349 are
OTHER INFORMATION: /note= "Nucleotides 234-349 are
OTHER INFORMATION: repeat sequence"
                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc_feature
LOCATION: 1..233
OTHER INFORMATION: /note= "Nucleotides 1-233 are
OTHER INFORMATION: unique flanking sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/623,906A
                                                                                      92;
                                           DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PELLING DATE:
FILING DATE:
CLASSIFICATION: 435
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Sherwood, Pamela J.
REGISTRATION NUMBER: 36,677
REFERENCE/COCKET NUMBER: A-62282/BIR
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-781-1989
INFORMATION FOR SEQ ID NO: 7:
INFORMATION FOR SEQ ID NO: 7:
LENGTH: 394 base pairs
LENGTH: 394 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
                                      Query Match 11.8%; Score 32.2; DE Best Local Similarity 4.3%; Pred. No. 0.94; Matches 10; Conservative 129; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 94111-4187
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 7, Application US/08623906A
Patent No. 5874217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         us-08-623-906A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
```

ö

```
122 cagigiticicaactiggitaaggaagaagaaacccagicaaigaaattcaatgaaattc 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122 cagigiteteaactiggitaaggaggaagaaacceagteaatgaaatteaatgaaatte 181
                                                                                                                                                                                                                                    APPLICANT: Young, Richard A.
APPLICANT: Young, Richard A.
APPLICANT: Thompson, Craig M.
APPLICANT: Thompson, Craig M.
TITLE OF INVENTION: No. 5922885el Factors Which Modify Gene
TITLE OF INVENTION: Transcription and Methods of Use Thereof
NUMBER OF SEQUENCES: 35
CORRESPONDENCE ADDRESS:
ADDRESSE: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Millia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; DB 2; Length 1004;
0.78;
                                                                                                              Query Match 11.5%; Score 31.4; DB 2; Length 1004; Best Local Similarity 56.2%; Pred. No. 0.78; Matches 59; Conservative 0; Mismatches 46; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46; Indels
                                                                                                                                                                                                                                                                                                  182 ttggaaacttccattaagtgtgtagattgagcaggtagtaattgc 226
                                                                                                                                                                                                                                                                                                                                       491 TTCAAGACTTGTTGATCCTGACCAGATCGATAAAAGAGAAATGGC 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/218,265
FILING DATE: 25-MR-1994
CLASSIFICATION: 435
ATORNEY/AGENT INFORMATION:
NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: 32,227
REFERENCE/DOCKET NUMBER: 91,27
TELEPHONE: 617-861-6240
TELEPHONE: 617-861-6340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.5%; Score 31.4; DE 56.2%; Pred. No. 0.78; Ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 7, Application US/08218265
Patent No. 5922585
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1004 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 11.5
Best Local Similarity 56.2
Matches 59; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 617-861-9540 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic acid
EDNESS: double
CDS
286..648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 02173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; NAME/KEY:
; LOCATION:
US-08-218-265-7
; NAME/KEY:
; LOCATION:
US-08-540-804-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-218-265-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                              ő
                                                                                                                                                                                                                                                                                                                                                   1769 TATGCAACTCACAAGATGCTAGGAGACTGAGAATTCAAACTGGCATACTGGCCCATGGAA 1710
                                                                                                                                                                                                                                                          64 taagtcagtcagttaagggggaggaggaggagggttataccttcagggggctaccagaca 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Young, Richard A.
APPLICANT: Young, Richard A.
APPLICANT: Thompson, Craig M.
APPLICANT: Chao, David M.
APPLICANT: Chao, David M.
TITLE OF INVENTION: No. 5919666el Factors Which Modify GeneTITLE OF INVENTION: Transcription and Methods of Use Therefor NUMBER OF SEQUENCES: 39
CORRESPONDENCE ADDRESS: ADDRESSE: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Militia Drive
                                                                                                                                                                  Query Match 11.6%; Score 31.6; DB 2; Length 2938; Best Local Similarity 52.2%; Pred. No. 1; Matches 70; Conservative 0; Mismatches 64; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER ELADABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/540,804
FLING DATE: 11-OCT-1995
CLASSIFICATION NUMBER: US/08/540,804
FLING DATE: 21-AUG-1995
PRIOR APPLICATION NUMBER: US/08/521,872
FILING DATE: 21-AUG-1995
PRIOR APPLICATION NUMBER: US/08/218,265
FILING DATE: 21-AUG-1995
FILING DATE: 25-AMR-1994
ATTONENEY/AGENT INFORMATION:
ANDER COMPANIENT OF AUG-1994
ATTONEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: WH194-03A2
TELECOMMUNICATION INFORMATION:
TELECHONE: 617-861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Sequence 7, Application US/08540804
; Patent No. 5919666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: 7: SEQUENCE CHARACTERISTICS: LENGTH: 1004 base pairs TYPE: nucleic acid STRANDENESS: double TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        617-861-9540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1649 TTAAAGAACAAATA 1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Lexington
STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                   184 ggaaacttccatta 197
  TOPOLOGY:
FEATURE:
NAME/KEY:
LOCATION:
US-08-343-443B-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
US-08-540-804-7
                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                               ò
```

g á

```
122 cagigiteteaaetiggitaaggaggaagaaaeeeagteaaigaaatieaatgaaatie 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Young, Richard A.
APPLICANT: Koleske, Anthony J.
APPLICANT: Koleske, Anthony J.
APPLICANT: Thompson, Craig M.
APPLICANT: Chao, David M.
TITLE OF INVENTION: No. 6214588el Factors Which Modify Gene
TITLE OF INVENTION: Transcription and Methods of Use Therefor
NUMBER OF SEQUENCES: 39
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Militia Drive
CITY: Lexington
CITY: Lexington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 56.2%; Pred. No. 0.78;
Matches 59; Conservative 0; Mismatches 46; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182 ttggaaacttccattaagtgtgtagattgagcaggtagtaattgc 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER REDABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: Floppy disk
COMPUTER: Floppy disk
COMPUTER: Floppy disk
COMPUTER: Patent In PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/590,399
FILING DATE: 26-JAN-1996
CLASSIFICATION NUMBER: US 08/540,804
FILING DATE: 11-OCT-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/521,872
FILING DATE: 31-AUG-1995
FILING DATE: 25-MAR-1994
FILING DATE: 25-MAR-1994
FILING DATE: 25-MAR-1994
ATORNEY/AGENT INFORMATION:
NAME: GTANDAN, WHERE: WH194-03A3
FELERENCE/DOCKET NUMBER: WH194-03A3
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFAX: 617-861-6240
INFORMATION FOR EXD ID NO: 7:
SEQUENCE CRARACTERISTICS:
LENGTH: 1004 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 105-08 
      Sequence 7, Application US/08590399
Patent No. 6214588
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
286..648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 02173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
US-08-590-399-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 cagtgiticicaactiggitaaggaggaagaaaacccagicaatgaaaticaatgaaatic 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Young, Richard A.
APPLICANT: Thompson, Craig M.
APPLICANT: Thompson, Craig M.
APPLICANT: Chao, David M.
APPLICANT: Chao, David M.
APPLICANT: Chao, David M.
APPLICANT: Thompson, Craig M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 56.2%; Pred. No. 0.78;
Matches 59; Conservative 0; Mismatches 46; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                182 ttggaaacttccattaagtgtgtagattgagcaggtagtaattgc 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            491 Trcaagactigtigatccigaccagatcgataaaagagaaatggc 535
182 ttggaaacttccattaagtgtgtagattgagcaggtagtaattgc 226
                                                                                                     491 TICAAGACTIGITGATCCTGACCAGATCGATAAAAGAGAAATGGC 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 02173

COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPAtible
SOFTWARE: PAtentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/521,872
FILING DATE: 31-AUG-1995
FILING DATE: 31-AUG-1995
FILING DATE: 25-MAR-1994
ATTORNEY/AGENT INFORMATION:
NAME: Granahan, Patricia
REGISTRATION NUMBER: 32.27
REEFERNCE/DOCKET NUMBER: WH194-03A
TELEFRAM: 617-661-9540
THOORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 1004 base pairs
TTARE: MUCHAL ACID
TELEFRAM: 617-661-9540
TELEFRAM: 617-661-9540
TELEFRAM: 617-661-9540
TELEFRAM: 617-661-9540
THOORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 1004 base pairs
TELEFRAM: 617-661-9540
THOORMATION THO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: CDS
LOCATION: 286..648
LOCATION INFORMATION:
DOCUMENT NUMBER: US 08/218,265
FILING DATE: 25-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 7, Application US/08521872
Patent No. 6015682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Lexington
STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-521-872-7
                                                                                                                                                                                                                                                                                                                                   RESULT 6
US-08-521-872-7
```

ö

Gaps

ö

RESULT

셤 ô

```
139 ttaaggaggaagaaacccagtcaatgaaattcaatgaaattctggaaacttccattaa 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                596 TICAAGATGGAAAAACCCTATAAAAGTAATATTGTCTAAGTCTGGGAATATTCATTTTA 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: HESSE, Holger
APPLICANT: HESSE, Holger
APPLICANT: HULLER-ROBER, Bernd
TITLE, OF INVENTION: DNA SEQUENCES AND PLASMIDS FOR THE
TITLE OF INVENTION: CONCENTRATION
TITLE OF INVENTION: CONCENTRATION
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ADDRESSEE: Ostrolenk, Faber, Gerb & Soffen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            199 gigigiagatigagcaggtagtaatigcaigcagitigiacattagigca 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 656 ATCAGCAAATITATCAAGATGAATCAACACCAATTTGGATATATACTGAA 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4; Length 1029;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CUERMIING SISIEM: FC-LOOPING MOST
SOFTHARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/553,436A
FILING DATE: 17-NOV-1995
CLASSIFICATION BOTO: ROOPING MOST
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PTING PAY-1994
FILING DATE: 20-MAY-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 4317596.1
APPLICATION NUMBER: DE P 4317596.1
APPLICATION NUMBER: DE P ATTORNEY AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3E: Ostrolenk, Faber, Gerb & Soffen
1180 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match
11.0%; Score 30; DB 4
Best Local Similarity 54.5%; Pred. No. 2.2;
Matches 60; Conservative 0; Mismatches
                                                                                                                            FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Dickinson, Todd 0
REGISTRATION NUMBER: 28,354
REFERENCE/DOCKET NUMBER: P50444-9
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-994-2252
TELEFAX: 215-994-2222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPOTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                US/09/369,700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
US-08-533-436A-1/c
is Sequence 1, Application US/08553436A
patent No. 5866790...
                  CORRIGATION NUMBER: US/09/369,7
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/978,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 24,735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Meilman, Edward
                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 1 SEQUENCE CHARACTERISTICS: LENGTH: 1029 base pairs TYPE: nucleic acid STRANDEDNESS: double
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 10036-8403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139 ttaaggaggaagaaacccagtcaatgaaattcaatgaaattcttggaaacttccattaa 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  596 TICAAGAIGGAAAAACCCIAIAAAAGIAAITIGICIAAGICIGGGAAIAITCAITITA 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199 gigigiagaligagcaggiagiaatigcaigcagiiigiacaliagigca 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             656 ATCAGCAAATTATCAAGATGAATCAACACCAATTTGGATATATACTGAA 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11.0%; Score 30; DB 3; Length 1029; 54.5%; Pred. No. 2.2; tive 0; Mismatches 50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Dechert Price & Rhoads
STREET: 4000 Bell Atlantic Tower, 1717 Arch Stre
CITY: Philadelphia
STATE: PA
COUNTRY: US
                                                                                                                          ADDRESSEE: Dechert Price & Rhoads
STREET: 4000 Bell Atlantic Tower, 1717 Arch Stre
CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/978,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Palmer, Leslie M.
TITLE OF INVENTION: NO. 6280735el r1bG
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                              APPLICANT: Pelmer, Leslie M.
TITLE OF INVENTION: NO. 6010881el ribG
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  %3-09-369-700-1
; Sequence 1. Application US/09369700
Patent No. 6280735
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Dickinson, Todd O
REGISTRATION NUMBER: 28,354
REFERENCE/DOCKET NUMBER: F504
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-994-2252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1029 base pairs
                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 54.5
Matches 60; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM CON
OPERATING SYSTEM:
SOFTWARE: FASTSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                            19103
                                                                                                                                                                                                              PA
                                                                                                                                                                                         CITY: Ph
STATE: P
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
```

DB 2; Length 3336;

```
139 ttaaggaggaagaaacccagtcaatgaaattcaatgaaattcttggaaacttccattaa 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       199 gigitagatigagcaggiagiaatigcaigcagiiligiacaitagigca 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 11.0%; Score 30; DB 2; Length 333 Best Local Similarity 54.5%; Pred. No. 3.4; Matches 60; Conservative 0; Mismatches 50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Dechert Price & Rhoads
STREET: 4000 Bell Atlantic Tower, 1717 Arch Stre
CITY: Philadelphia
STATE: PA
COUNTRY: US
ZIP: 19103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/978,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Palmer, Leslie M.
TITLE OF INVENTION: No. 6010881el ribG
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ATTORNEY/AGENT INFORMATION:
NAME: DICKINSON, O. TOGG
REGISTRATION NUMBER: 28,354
REFERENCE/DOCKET NUMBER: P50444-07
TELECOMUNICATION INFORMATION:
TELEPHONE: 215/994-2252
TELEPHONE: 215/994-2222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 7, Application US/08978456 Patent No. 6010881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Dickinson, Todd Q
REGISTRATION NUMBER: 28,354
REFERENCE/DOCKET NUMBER: P504
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-994-2252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM COMPATIBLE
OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 7
SEQUENCE CHARACTERISTICS:
LENGTH: 3336 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                INFORMATION FOR SEQ ID NO: 7
SEQUENCE CHARACTERISTICS:
LENGTH: 3336 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TOPOLOGY: 11near
US-08-978-456-7
                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
US-08-978-456-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55 gatcaagtttaagtcagttaagggggaggagaaggagagaggttataccttcagggggc 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    115 taccagacagtgttctcaacttggttaaggaggaagaagaacccagtcaatgaaattca 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Beta vulgaris
INDIVIDUAL ISOLATE: ADP Glucose Pyrophosphorylase, large
INDIVIDUAL ISOLATE: subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 30; DB 2; Length 1925;
Pred. No. 2.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEE: Dechert, Price & Rhoads
: 4000 Bell Atlantic Tower, 1717 Arch Stre
Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: DOS
SOFTWARE: FastSED for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/977,554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
      REFERENCE/DOCKET NUMBER: P/951-117
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 382-0700
TELEPHONE: (212) 382-0888
TELEX: 236925
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1925 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US97/02318
FILING DATE: 15-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Palmer, Leslie M.
Fedon, Jason C.
Warren, Richard L.
Traini, Christopher M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 7, Application US/08977554 Patent No. 5891672 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Mooney, Jeffrey
APPLICANT: Debouck, Christine
APPLICANT: Zhong, Y1Y1
APPLICANT: Black, Michael
TITLE OF INVENTION: TIDA
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wang, Min
Jaworski, Deborah D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 19103-2793
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ouery Match 11.0%;
Best Local Similarity 53.4%;
Matches 63; Conservative (
                                                                                                                                                                                                                                                                                                                                                                        LIBRARY: phage lamda zap
                                                                                                                                                                                                                                                                                                                                                                                                                                    206..1774
                                                                                                                                                                                                                                                                                                                                                    IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
STREET: 40
                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION:
08-553-436A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-977-554-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY:
STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
```

g ò

```
139 ttaaggaggaagaaacccagtcaatgaaattcaatgaaattctagaaacttccattaa 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      596 TICAAGAIGGAAAAACCCTATAAAAGTAATATIGTCTAAGTCTGGGAATATTCATITTA 655
199 gigigiagatigagcaggiagiaatigcaigcagiitgiacaitagigca 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               656 ATCAGCAAATITATCAAGAIGAATCAACACCAATTIGGAIATATACIGAA 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 4; Length 3336;
                                                                               199 gigigiagatigagcaggiagiaatigcaigcagtiigiacatiagigca 248
                                                                                                     50; Indels
                                                                                                                                                                                                                                                                     APPLICANT: Palmer, Leslie M.
APPLICANT: Palmer, Leslie M.
1711LE OF INVENTION: No. 6280735el ribG
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESSE: 4000 Bell Atlantic Tower, 1717 Arch Stre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastEMS for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/369,700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 30; DB 4
Pred. No. 3.4;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 7, Application US/09227806; Patent No. 6280971
GENERAL INFORMATION: GENERAL INFORMATION: APPLICANT: Palmer, Lealle M. APPLICANT: Fedon, Jason C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/978,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Dickinson, Todd O
REGISTRATION NUMBER: 28,354
REFREENCE/POCKET NUMBER: P504
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-994-225
TELEFAX: 215-994-222
                                                                                                                                                                                                                 ; Sequence 7, Application US/09369700
; Patent No. 6280735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 3336 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 54.5%;
Matches 60; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: PA
COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
US-09-227-806-7
                                                                                                                                                                                          RESULT 14
US-09-369-700-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                          g
                                                                                               ð
                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                     139 ttaaggaggaagaaacccagtcaatgaaattcaatgaaattcttggaaacttccattaa 198
                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 30; DB 4; Length 3336;
Pred. No. 3.4;
0; Mismatches 50; Indels
                                                                                                                                                                                                199 gigigiagaitgagcaggiagiaattgcaigcagittgiacaitagigca 248
                                                                                                                                                                                                                           Length 3336;
                                                                                       50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Dechert, Price & Rhoads
STREET: 4000 Bell Atlantic Tower, 1717 Arch Stre
CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
                                                    DB 3;
                                                      Score 30; DB 3 pred. No. 3.4; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: PCT/US97/02318
PPLICATION NUMBER: PCT/US97/02318
FILING DATE: 19-FEB-1997
ATTORNEY/AGENT INFORMATION:
NAME: DICKINSON, 0. Todd
REGISTRATION NUMBER: 28,354
REFERENCE/DOCKET NUMBER: P50444-07
TELECOMMUNICATION INFORMATION:
TELECHOME: 215/994-2252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/225,967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/977,554
                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Fedon, Jason C.
APPLICANT: Fedon, Jason C.
APPLICANT: Warren, Richard L.
APPLICANT: Wang, Min
APPLICANT: Wang, Min
APPLICANT: Jaworski, Deborah D.
APPLICANT: Jaworski, Deborah D.
APPLICANT: Jaworski, Jeffrey
APPLICANT: Debouck, Christine
APPLICANT: Zhong, YiYi
APPLICANT: Black, Michael
TITLE OF INVENTION: ribA
NUMBER OF SEQUENCES: 7
                                                                                                                                                                                                                                                                                                                          US-09-225-967-7
; Sequence 7, Application US/09225967
; Patent No. 6171598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                 Palmer, Leslie M.
                                                    11.0%;
milarity 54.5%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 3336 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 54.5
Matches 60; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 215/994-2222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
US-09-225-967-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19103-2793
                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Palmer,
                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS
                                                          Query Match
'Best Local Si
Matches 60;
```

```
PRPLICANT: Warren, Kichtopher M.

APPLICANT: Wang, Min.
APPLICANT: Wang, Min.
APPLICANT: Savora's Cifferoy
APPLICANT: Savora's Cifferoy
APPLICANT: Deboar D.
```

Search completed: August 16, 2002, 13:41:11 Job time: 6726 sec

```
Corn sterol acyltr
CDNA encoding huma
Chemically pretrea
Human immune syste
Partial CDNA clone
                          Human immune syste
Canine genomic mic
Microsatellite rep
Human Hum-Fli-1 ge
Human shear stress
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human immune/haema
Pyrimidine deamina
Human breast and o
                                                                                                                                                                                                                                                                         Chemically pretrea
Human immune syste
Human immune/haema
                                                                                                                                                                                                                                                                                                                                                                                                     Human reproductive
DNA encoding novel
                                                                                                                                                         Human neuregulin-1
Human neuregulin-1
                                                                                                                                                                                                                             Arabidopsis thalla
Arabidopsis thalla
Arabidopsis thalla
                                                                                                                                                                                                                                                                                                                                                                                                                                     Human cDNA sequenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                Human reproductive
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1mmune/haema
                                                                                                                                                                                                                                                                                                                                                                                        CDNA clone #2 enco
                                                                                                               Human immune syste
C. elegans cDNA en
C. elegans genomic
                                                                                                                                                                                      plasmodium falcipa
                                                                                                                                                                                                 Genomic fragment #
Human polynucleoti
                                                                                                    Yeast transcriptio
Drosophila melanog
Human secreted pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gene signature; messenger RNA; mRNA; relative abundance; frequency; human; cloning; mapping; non-biased library; diagnosis; detection; cell typing; abnormal cell function; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Identifying gene signatures in 3'-directed human cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP.
                                                                                                                                                    AAS03282
AAK95240
                                                                                                                                                                                                                                                                                AAS45299
ABL32083
AAK68742
AAS01100
AAX59765
                                                                                                                                                                                                                                                                                                                                                                                                                            AAS68937
AAH18670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAT21382 standard; cDNA to mRNA; 229
                                                                                                                                                                                              AAF28546
                                                                                                                                                                                                                                                                                                                                                     AAS45498
                                                                                                                                                                                                                         AA191712
                                                                                                                                                                                                                                                                                                                                                                      ABL34107
                                                                                                                                      AAS03283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human gene signature HUMGS02746.
                                                                                                            94WO-JP01916.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93JP-0355504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                3709 .
11.4 1503900 2
11.4 1503900 2
                                                                                                                                                                                                                                                                                                                                                                                                  695
1726
3753
6153
8031
304
1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matsubara K, Okubo K;
                                                                                                                                                                                                                                                                                                                                                         17142
17142
547
                                                                                                                                                                                                                                                                                                 6665
13158
1587
5874
                                                                                                                                                                                                 3303
63563
                                                                                                                                                                                                                                                        3072
                                                                                                                             8323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1995-206931/27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (MATS/) MATSUBARA K.
(OKUB/) OKUBO K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         409514772-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUN-1995.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-AUG-1996
                                                                                                                                                            AAT21382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAT21382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human immune syste
Human DNA for a no
Human immune syste
DNA encoding novel
Drosophila melanog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human gene signatu
Human breast cance
Human breast cance
                                                                                                          August 16, 2002, 12:35:24; Search time 211.74 Seconds (Without alignments) 2213.647 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                        N_Geneseq_032802:*

N_Geneseq_032802:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1984.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1984.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1984.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1985.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1987.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1989.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1989.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1989.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1995.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1995.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA2001.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA2001.DAT:*

SIDSI/gcgdata/geneseq/geneseqn-embl/NA2001.DAT:*
                                                                                                                                                                    US-09-761-579-2_COPY_1200_1472
273
1 ctaccacatctactccagcg.....agatgaattattgagtgctt 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                           Compugen Ltd
                                                                                                                                                                                                                                                                                                      tal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                         1736436 seqs, 858457221 residues
                             GenCore version 4.5
Copyright (c) 1993 - 2000 Comp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAT21382
AAL23550
AAL14688
ABL32060
AAS34556
AAS34556
AAS65647
ABL16660
                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                        nucleic search, using sw model
                                                                                                                                                                                                                                     IDENTITY_NUC Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ü
                                                                                                                                                                                                                                                                                                                                                                                                                                     N_Geneseq_032802:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16
22
23
23
23
23
23
23
23
23
                                                                                                                                                                                                                                                                                                                                        length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              229
275
311
7516
27179
113515
2700
3613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              79.5
777.1
12.7
12.3
12.2
12.2
12.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217
215.4
210.4
34.6
33.8
33.8
33.2
33.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
```

Minimum DB seq Maximum DB seq

Database :

Result Š

O

Title: Perfect score:

sedneuce:

OM nucleic

Run on:

Scoring table:

Searched:

New peptide useful as a marker for the diagnosis of breast cancer

WPI; 2001-451856/48.

(MILL-) MILLENNIUM PREDICTIVE MEDICINE INC. Lillie J, Xu Y, Wang Y, Steinmann K;

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                            ö
                                                                A single-stranded DNA (or its complementary strand or the corresp. Codouble-stranded DNA) which comprises one of the 7837 "65" sequences given in AAT19001-T26837 and which is able to hybridise to part of human genomic DNA, cDNA or mRNA is claimed. The GS (Gene Signature) sequences were obtained from 3'-directed cDNA ibraries prepared from various human tissues; synthesis of CDNA was initiated from the 3'-end of mRNA by using poly!" as the sole primer. Since the 3'-en untranslated sequence is unique to a particular mRNA species, almost all the 3'-oriented cDNAs hybridise with specific mRNAs. Each library is constructed so as to reflect accurately the relative abundance of different mRNAs in the particular tissue from which it was derived. The appearance frequency of a given GS in a cDNA library can be determined (esp. using primers and probes derived from the GS sequences) as means of diagnosing abnormal cell function or for
                                                                                                                                                                                                                                                                                                                                                                                      gatcaagtttaagtcagttaagggggaggaggaggaggaggttataccttcagggggc 114
                                                                                                                                                                                                                                                                                                                                                                          115 taccagacagtgttctcaacttggttaaggaggaagaaacccagtcaatgaaattcaat 174
                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                            for diagnosis of abnormal cell function, by preparing cDNA that reflects relative abundance of corresp. mRNA in specific human
                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                     Length 229;
                                                                                                                                                                                                                                                                                                           2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human breast cancer expressed polynucleotide 16007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; breast cancer; cell marker; cytostatic; ss.
                                                                                                                                                                                                                                                   Sequence 229 BP; 79 A; 27 C; 57 G; 64 T; 2 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  235 tgtacattagtgcattaaaagatgaattattgagtgctt 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 217; DB 16;
Pred. No. 4.6e-59;
                                                                                                                                                                                                                                                                                                          0; Mismatches
                                            Claim 1; Page 872-873; 2245pp; Japanese.
                                                                                                                                                                                                                              ecognising different cell types.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAL23550 standard; cDNA; 275 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20000S-0189167.
20000S-0192099.
20000S-0193480.
20000S-0205330.
20000S-020533.
                                                                                                                                                                                                                                                                                    79.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-JAN-2001; 2001WO-US00798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0176077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-DEC-2001 (first entry)
                                                                                                                                                                                                                                                                                              Best Local Simitation
Matches 217; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200151628-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-MAR-2000;
29-MAR-2000;
15-MAY-2000;
09-JUN-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo saptens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-JAN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-JUL-2001
                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAL23550;
                                                                                                                                                                                                                                                                                                                               22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAL23550
                                                                                                                                                                                                                                                     3
 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

```
The invention relates to human breast cancer expressed polynucleotides (AAL07544-AAL26789) and methods of assessing whether a patient is afflicted with breast cancer by examining the correlation between the expression of certain markers and the cancerous state of breast cells. The polynucleotides and encoded polypeptides are potential markers for detecting, diagnosing, monitoring, characterising treating and potentially preventing breast cancer. The polynucleotides and encoded polypeptides are also useful for isolating compounds with cytostatic activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gtttaagtcagtcagttaaggggaggagaaggagaagggttataccttcagggggctaccag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                              1 ctaccacatctactccagcgacccaccttttgaagttcgtggtgccaatcagtggatcaa 60
                                                                                                                                                                                                                                                                                                                                                                                                                  121 acagtgttctcaacttggttaaggaggaagaaaacccagtcaatgaaattcaatgaaatt
                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                 DB 22; Length 275;
                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human breast cancer expressed polynucleotide 7145.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; breast cancer; cell marker; cytostatic; ss
                                                                                                                                                                                                                                                     Sequence 275 BP; 78 A; 59 C; 63 G; 75 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                             16;
                                                                                                                                                                                                                                                                                                            78.9%; Score 215.4; DB 2
93.4%; Pred. No. 1.6e-58;
tive 0; Mismatches 16
Claim 1; Page 2922; 3695pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAL14688 standard; cDNA; 311 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0176077.
2000US-0189167.
2000US-0192099.
2000US-0193480.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-JAN-2001; 2001WO-US00798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                  Local Similarity 93.4 les 225; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200151628-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-JAN-2000;
14-MAR-2000;
24-MAR-2000;
29-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-JUL-2001,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 t 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           t 269
                                                                                                                                                                                                                                                                                                              Query Match
Best Local Si
Matches 225;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAL14688;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         269
```

```
2
       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                 The invention relates to human breast cancer expressed polynucleotides (AALO7544-AAL26789) and methods of assessing whether a patient is affilicted with breast cancer by examining the correlation between the expression of certain markers and the cancerous state of breast cells. The polynucleotides and encoded polypeptides are potential markers for detecting, diagnosing, monitoring, characterising treating and potentially preventing breast cancer. The polynucleotides and encoded polypeptides are also useful for isolating compounds with cytostatic activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gtttaagtcagtcagttaaggggaggaggaggaggaggttataccttcagggggctaccag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                              19 ctaccacatntactccancgacccaccttngaagttcntggtgccaatcagtggatcaa 88
                                                                                                                                          New peptide useful as a marker for the diagnosis of breast cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ctaccacatctactccagcgacccaccttttgaagttcgtggtgccaatcagtggatcaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antiarteriosclerotic; antianaemic; cytostatic; nootropic;
meuroprotective; anti-HIV; anticonvulsant; ophthalmological;
antitheumatic; antiarthritic; antidiabetic; antipsoriatic;
antiinflammatory; cancer; eye disease; atteriosclerosis; anaemia;
acute myeloid leukaemia; Alzheimer's disease; AIDS; epilepsy;
neurofibromatosis; rheumatoid arthritis; psoriasis; bowel disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; immune system disease; cytosine methylation; antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                              Length 311;
                                                                                                                                                                                                                                                                                                                                                                                                                        39; Indels
                                                                                                                                                                                                                                                                                                                                               Sequence 311 BP; 85 A; 60 C; 62 G; 74 T; 30 other;
                                                                                                                                                                                                                                                                                                                                                                                         DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human immune system associated gene SEQ ID NO: 33.
                                                                                                                                                                                                                                                                                                                                                                                        77.1%; Score 210.4; DB 2.84.8%; Pred. No. 6.4e-57; Live 0; Mismatches 39
                                                        (MILL-) MILLENNIUM PREDICTIVE MEDICINE INC
                                                                                     Wang Y, Steinmann K;
                                                                                                                                                                       Claim 1; Page 1292; 3695pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
2000US-0205230.
2000US-0211315.
2000US-0220534.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABL32060 standard; DNA; 7516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                      Ouery Match 77.1
Best Local Similarity 84.8
Matches 217; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 ttagtgcattaaaaga 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          269 teggnegntetaaaaa 284
                                                                                                                WPI; 2001-451856/48.
                                                                                     Xu X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-MAR-2002
                                                                                   -Lillie J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABL32060;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABL32060
38%8
```

셤

g ð

ö 셤 ò g 

```
The present invention provides a number of human immune system associated genes which are modified by the methylation of cytosines. The sequences can be used in the diagnosis and treatment of immune system disorders, including eye diseases such as retinopathy, neovascular glaucoma and macular degeneration, arteriosclerosis, anaemia, cancer, acute myeloid leukaemia, Alzheimer's disease, Alzheimer's disease, Alzheimer's disease, and inflammatory/ulcerative bowel diseases. The present sequence is a gene of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       173 atgaaattottggaaacttocattaagtgtgtagattgagcaggtagtaattgcatgcag 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; foetal tissue antigen; ds; antiinflammatory; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immunomodulator; cardiovascular; cytostatic; nephrothropic; cardiovascular; autoimmune disease; rheumatoid arthritis; hyperproliferative disorder; breast neoplasm; cancer; cardiovascular disorder; cardiac arrest; cerebrovascular disorder; cerebral ischaemia; andjogenesis; nervous system disorder; Alzheimer's disease; infection; ocular disorder; corneal infection; wound healing; epithelial cell proliferation; food additive.
                                                                                                                                                                                                                                                                                                                                   Nucleic acid comprising fragment of chemically modified gene, us for diagnosis and treatment of diseases associated with abnormal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 7516;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 7516 BP; 2495 A; 36 C; 1376 G; 3609 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID NO 33; 32pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human DNA for a novel foetal antigen, SEQ ID No 1980.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12.7%; Score 34.6; DB 24; 59.8%; Pred. No. 1.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          233 tttgtacattagtgcattaaaagatgaattattgagt 269
                                                                                                                                                                                                                                                Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAS34556 standard; DNA; 27179
                                                                                                                                 30-JUN-2000; 2000DE-1032529.
                                                                                    02-JUL-2001; 2001WO-EP07537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-JAN-2001; 2001WO-US01321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 59.8
Matches 58; Conservative
                                                                                                                                                                                                                                            Olek A, Piepenbrock C,
                                                                                                                                                                                                 (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                                                                                                                                                                                                                cytosine methylation
                                                                                                                                                                                                                                                                                      WPI; 2002-130909/17
WO200200928-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200155312-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo saptens,
                                          03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAS34556;
```

```
24 - FEB - 2000; 2000GS - 0184664.
10 - WAR - 2000; 2000GS - 018674.
11 - WAR - 2000; 2000GS - 018674.
12 - WAR - 2000; 2000GS - 019674.
13 - WAY - 2000; 2000GS - 019674.
14 - WAY - 2000; 2000GS - 019674.
15 - UIN - 2000; 2000GS - 019671.
28 - UIN - 2000; 2000GS - 0216880.
14 - MAY - 2000; 2000GS - 0216880.
11 - JUL - 2000; 2000GS - 0216880.
12 - JUL - 2000; 2000GS - 0216880.
13 - JUL - 2000; 2000GS - 0216880.
14 - AUG - 2000; 2000GS - 0225264.
14 - AUG - 2000; 2000GS - 0225264.
14 - AUG - 2000; 2000GS - 0225264.
14 - AUG - 2000; 2000GS - 0225268.
15 - AUG - 2000; 2000GS - 0225268.
16 - SEP - 2000; 2000GS - 0225268.
16 - SEP - 2000; 2000GS - 0229343.
16 - SEP - 2000; 2000GS - 023349.
17 - SEP - 2000; 2000GS - 023349.
18 - SEP - 2000; 2000GS - 023349.
19 - SEP - 2000; 2000GS - 023349.
11 - SEP - 2000; 2000GS - 023349.
11 - SEP - 2000; 2000GS - 023349.
12 - SEP - 2000; 2000GS - 023349.
13 - SEP - 2000; 2000GS - 023349.
14 - SEP - 2000; 2000GS - 023349.
15 - SEP - 2000; 2000GS - 023349.
16 - SE
2000US-0179065
2000US-0180628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -SEP-2000;
-SEP-2000;
-SEP-2000;
-SEP-2000;
PRESENTATION OF SERVICE SERVICES SERVIC
```

2000US-0239937.
2000US-0241985.
2000US-0241786.
2000US-0241786.
2000US-0241809.
2000US-0241809.
2000US-0241809.
2000US-0244617.
2000US-0244617.
2000US-0244617.
2000US-024647.
2000US-024647.
2000US-0246524.
2000US-0246528.
2000US-0246528.
2000US-0246528.
2000US-0246528.
2000US-0246528.
2000US-0246528.
2000US-0246528.
2000US-0246528.
2000US-0246528.
2000US-0246518.
2000US-0249208.
2000US-0249208.
2000US-0249218.
2000US-0249218. 20000S-0229264 20000S-0249265 20000S-0249297 20000S-0249297 20000S-0249290 20000S-0249290 20000S-0250390 20000S-0250390 20000S-0250390 20000S-0250390 20000S-0250390 200105-0259678 02-OCT-2000; 02-OC 

SM Barash SC, Ruben HUMA-) HUMAN GENOME Š Rosen

WPI; 2001-488782/53

New polynucleotides and polypeptides for diagnosing, treating, preventing or prognosing e.g. diseases or disorders of the nervous, musculoskeletal, excretory, gastrointestinal, reproductive, and

Berlin K;

```
Nucleic acid comprising fragment of chemically modified gene, useful for diagnosis and treatment of diseases associated with abnormal cytosine methylation
                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID NO 2148; 32pp + Sequence Listing; German.
          30-JUN-2000; 2000DE-1032529.
01-SEP-2000; 2000DE-1043826.
                                                                                                                                  Piepenbrock C,
                                                                                    (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                WPI; 2002-130909/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-0CT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAS65647;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                       olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAS65647/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
The invention relates to novel nucleic acids encoding novel human foetal antiques. The nucleic acids and proteins are used to prevent, treat (e.g. antiques. The nucleic acids and proteins are used to prevent, treat (e.g. rabbits, goats, horses, cats, dogs, chickens or sheep. They care also used in diagnosing a pathological condition in e.g. humans, mice, cor a pathological condition. The antibodies to the antiques can also cor a pathological condition. The antibodies to the antiques can also cor a pathological condition. The antibodies to the antiques can also cor allowater assays (ELISA). Disorders which are diagnosed or treated include autofinmune diseases e.g. rheumatoid arthritis, horselve disorders e.g. neoplasms of the breast or liver, hyperproliferative disorders e.g. cardiovascular disorders e.g. cardiovascular disorders e.g. cardiovascular disorders e.g. cardiac arrest, cerebrovascular disorders e.g. corneal infection. The pupperfides can also be used to aid wound healing and epithelial cell proliferation, to be used to aid wound healing and epithelial cell proliferation, to transplantation, for supporting cell culture of primary fissues, to capabilities, fat content, lipid, protein, carbohydrate, vitamins, capabilities, fat content, lipid, protein, carbohydrate, vitamins, capabilities, content, lipid, protein, carbohydrate, vitamins, capacitics and other nutritional components. Numerous capabilities are given in the specification. The present sequence content sequence is a genomic DNA fragment from a gene encoding a foetal antigen of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9219 cacatttccttttaggttgtttatgcagcagttttatctcgccttaagaatgaaagttac 9278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9159 teiteiggaaatagitatagiggtaaggaagataaietigataaaietaattageigiat 9218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     185 gaaacttocattaagtgtgtagattgagcaggtagtaattgcatgcagtttgtacattag 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         125 tgttctcaacttggttaaggaggaagaaaacccagtcaatgaaattcaatgaaattcttg 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; Immune system disease; cytosine methylation; antiasthmatic; antiarteriosclerotic; antianaemic; cytostatic; nootropic; neuroprotective; anti-HIV; anticonvulsant; ophthalmolodica; antirhematic; antiarthritic; antidabetic; antipsoriatic; antinflammatory; cancer; eye disease; arteriosclerosis; anaemia; acute myeloid leukaemia; Alzheimer's disease; AIDS; epilepsy; neurofibromatosis; rheumatoid arthritis; psoriasis; bowel disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 52.5%; Pred. No. 3.8;
Matches 74; Conservative 0; Mismatches 67; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human immune system associated gene SEQ ID NO: 2148.
                                                          Disclosure; SEQ ID No 1980; 642pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABL34175 standard; DNA; 113515 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       245 tgcattaaaagatgaattatt 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-JUL-2001; 2001WO-EP07537.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-MAR-2002 (first entry)
                       respiratory systems
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200200928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABL34175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
```

ò 셤 ð g

ð

,ឧឧឧឧឧ

```
ö
The present invention provides a number of human immune system associated genes which are modified by the methylation of cytosines. The sequences can be used in the diagnosis and treatment of immune system disorders, including eye diseases such as retinopathy, neovascular glaucoma and macular degeneration, arteriosclerosis, anaemia, cancer, acute myeloid leukaemia, Alzheimer's disease, AIDS, epilepsy, neurofibromatosis, rheumatoid arthritis, psoriasis and inflammatory/ulcerative bowel diseases. The present sequence is a gene of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              10708 aggaaaaaaaggaaaggtaacgattggtaagtttagattgggttaagtaattagaaatta 10767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    159 gicaaigaaaiicaaigaaaiiciiggaaaciiccaiiaagigigiagaiigagcaggia 218
                                                                                                                                                                                                                                                                                                                                                                                                                             99 tatacottcagggggctaccagacagtgttctcaacttggttaaggaggaagaaaccca 158
                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder; ss
                                                                                                                                                                                                                                                                                                                         Length 113515;
                                                                                                                                                                                                                                           Sequence 113515 BP; 35172 A; 1174 C; 22520 G; 54649 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         219 gtaattgcatgcagtttgtacattagtgcattaaaagatgaattattg 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ONA encoding novel human diagnostic protein #1451.
                                                                                                                                                                                                                                                                                                                               Score 33.6; DB 24;
Pred. No. 7.6;
                                                                                                                                                                                                                                                                                                                                                                                   84;
                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAS65647 standard; cDNA; 2700 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tang YT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                                                                                                    12.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 50.0
Matches 84; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drmanac RT, Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
```

```
137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABL16478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain readtion (FCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polymerase chain reaction (FCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polymucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful in medical imaging of sites expression (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity.

The polypeptide and polynucleotide sequences have applications in diagnostics, formsics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. Ax564197-Ax594564 represent novel human data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at the vibro...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1124 AAAGAGTATAAAAAGTTATTCATTTAAATATATACAAACTCTTTTAAACTCAAATACTGT 1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   201 gigitagatigagcaggtagtaatigcatgcagtitigiacattagtgcattaaaaagaigaa 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              141 aaggaggaagaaacccagtcaatgaaattcaatgaaattcttggaaacttccattaagt 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                       New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila; developmental biology; cell signalling; insecticide; pharmaceutical; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 2700;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Drosophila melanogaster genomic polynucleotide SEQ ID NO 1453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2700 BP; 761 A; 562 C; 575 G; 802 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 33.2; DE Pred. No. 2.4; 0; Mismatches
                                                                                                              English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABL16660 standard; DNA; 3613 BP.
                                                                                                              Claim 1; SEQ ID No 1451; 103pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12.2%;
54.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-MAR-2001; 2001WO-US09231.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity ...
nes 68; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drosophila melanogaster.
    2001-639362/73.
                P-PSDB; ABG01460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             261 ttattg 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1004 ATATTG 999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABL16660;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABL16660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38888888888%&
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
    ######
```

```
The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention is useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL010140-ABL30511), expressed DNA sequences (ABL010440-ABL16175) and the encoded proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                    New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3408 ggataaacataaacaaaaccaagacaaagaattcaaagagcagctttggtaacttgcaat 3467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ggttaaggaggaagaaacccagtcaatgaaattcaatgaaattcttggaaacttccatt 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drosophila; developmental blology; cell signalling; insecticide; pharmaceutical; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 3613;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drosophila melanogaster genomic polynucleotide SEQ ID NO 907
                                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID NO 1453; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3613 BP; 948 A; 876 C; 843 G; 946 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 33.2; DB 23;
Pred. No. 2.7;
0; Mismatches 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Myers EW;
                                                                                                                                             Myers EW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABL16478 standard; DNA; 4356 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           L1 PWD,
                                                                                                                                             Li PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3468 tagetttaatattgagea 3485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-MAR-2001; 2001WO-US09231.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12.2%;
ilarity 64.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-MAR-2000; 2000US-191637P,
11-JUL-2000; 2000US-0614150.
23-MAR-2000; 2000US-191637P.
11-JUL-2000; 2000US-0614150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              197 aagtgtgtagattgagca 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Adams M,
                                                                                                                                             Venter JC, Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-656860/75.
                                                                                                                                                                                                       WPI; 2001-656860/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PEKE ) PE CORP NY.
                                                                                       (PEKE ) PE CORP NY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
nes 50; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200171042-A2.
                                                                                                                                                                                                                                                                                                                    interactions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Venter JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Si
Matches 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABL16478;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
```

```
99US-0144884.
99US-0144814.
99US-0145086.
99US-0145088.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99US-0143624.
99US-0144005.
99US-0144085.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0142154.
99US-0142055.
99US-0142390.
                                                                                                                                                                                                                                          990S-0138094,
990S-0138540,
990S-0138542,
990S-0139159,
990S-0139453,
990S-0139454,
990S-0139456,
990S-0139456,
990S-0139456,
990S-0139456,
                                                                                                                                                                                                                                                                                                                                                                                                 990S-0139461.
990S-0139462.
990S-0139463.
990S-0139750.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99US-0144335
99US-0144352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0143542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0144332
99US-0144333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-0144334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0144632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0142803
99US-0142920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0144086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0144325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0144331
                                                                                                                                                                                                 990S-0137222.
990S-0137528.
990S-0137502.
990S-0137724.
99US-0132484.
99US-0132485.
99US-0132486.
99US-0132863.
99US-0132863.
99US-0134218.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                99us-0139899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0140353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0140354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0140695
99US-0140823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-0140991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-0141842
                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-0139817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0141287
                                                                                                                       99US-0134941.
                                                                                                                                  99US-0135124.
                                                                                                                                                       99US-0135629
                                                                                                                                                                             99US-0136392
                                                                                                                                                                                        99US-0136782
                                                                                                99US-0134370
                                                                                       99US-0134221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14 - JUL - 1999)
15 - JUL - 1999)
16 - JUL - 1999
19 - JUL - 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                22 - JUN - 1999;
23 - JUN - 1999;
24 - JUN - 1999;
28 - JUN - 1999;
29 - JUN - 1999;
30 - JUL - 1999;
01 - JUL - 1999;
06 - JUL - 1999;
08 - JUL - 1999;
12 - JUL - 1999;
13 - JUL - 1999;
                                                                                                                                                                                                                                                                                                                                                                             18-JUN-1999;
                                                                                                                                                                                                                                 07 - JUN - 1999;
08 - JUN - 1999;
10 - JUN - 1999;
14 - JUN - 1999;
16 - JUN - 1999;
16 - JUN - 1999;
                       06-MAY-1999;

06-MAY-1999;

10-MAY-1999;

14-MAY-1999;

14-MAY-1999;

14-MAY-1999;

14-MAY-1999;

19-MAY-1999;

20-MAY-1999;

21-MAY-1999;

21-MAY-1999;

22-MAY-1999;

23-MAY-1999;

25-MAY-1999;

25-MAY-1999;

27-MAY-1999;

27-MAY-1999;

27-MAY-1999;

27-MAY-1999;

27-MAY-1999;

01-UIN-1999;

01-UIN-1999;

03-UIN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-JUN-1999;
22-JUN-1999;
                                                                                                                                                                                                                                                                                                                                    :666
                                                                                                                                                                                                                                                                                                                                                                    :6661
                                                                                                                                                                                                                                                                                                                                               :666
     ö
                                                                     The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention is useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insciticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL16175) and the encoded proteins
                                                                                                                                                    (ABB57737-ABB72072).
The sequence data for this patent did not form part of the printed The sequence data for this patent directly from WIPO specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                  New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell
                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hybridisation assay; genetic mapping; gene expression control; protein identification; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.
                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                        Query Match 12.2%; Score 33.2; DB 23; Length 4356; Best Local Similarity 64.1%; Pred. No. 2.9; Mamatches 50; Conservative 0; Mismatches 28; Indels 0; Matches 50; Conservative 0; Mismatches 28; Indels 0;
                                                                                                                                                                                                         Sequence 4356 BP; 1165 A; 942 C; 1021 G; 1228 T; 0 other;
                                                    Claim 1; SEQ ID NO 907; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arabidopsis thaliana DNA fragment SEQ ID NO: 56594.
                                                                                                                                                                                                                                                                                                                                                                                                           AAC48192 standard; DNA; 1464 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               990x-0121825.
990x-0123180.
990x-0123548.
990x-0125788.
990x-0126785.
990x-0127462.
990x-0127462.
990x-0127462.
990x-012945.
990x-012945.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          990S-0130891.
990S-0131449.
990S-0132048.
990S-0132407.
                                                                                                                                                                                                                                                                                                                                  25-FEB-2000; 2000EP-0301439.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-OCT-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Arabidopsis thallana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-FEB-1999;
05-MAR-1999;
05-MAR-1999;
23-MAR-1999;
25-MAR-1999;
01-APR-1999;
06-APR-1999;
16-APR-1999;
16-APR-1999;
13-APR-1999;
13-APR-1999;
13-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-APR-1999;
28-APR-1999;
30-APR-1999;
30-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EP1033405-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-SEP-2000
                                      interactions
                                                                                                                                                                                                                                                                                                                                                                                                                                       AAC48192;
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
```

요

g ð 99US-0160768

us-09-761-579-2\_copy\_1200\_1472.rng

```
990S-0155659.
990S-0156458.
990S-0156717.
990S-0157717.
990S-0157865.
990S-01588232.
                                                                                                                                                                                                                                                                                              990S-0152363.
990S-0153070.
990S-0153758.
990S-0154018.
                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0159330
99US-0159331
                                                                                                                 990S-0147192
990S-0147192
990S-0147303
990S-0147416
990S-0147493
990S-0148171
990S-0148171
990S-0148319
                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0159637
99US-0159638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0160741
99US-0160767
                                                                                                                                                                                                                                                                                                                                                                                                            99US-0159293
                                                                                                                                                                                                                                                                                                                                                                                                                               99US-0159329
                                                                                                                                                                                                                                                                                                                                                                                                                                                               990S-0159584
                                                                                                                                                                                                                                                                                  99US-0151438.
                                                                                                                                                                                                                                                  990S-0150884
990S-0151065
                  990S-0145192.
990S-0145145.
990S-0145218.
990S-0145224.
990S-0145276.
                                                                            99US-0146386.
99US-0146388.
99US-0146389.
                                                                                                                                                                                                                         99US-0149929
                                                                                                                                                                                                                                99US-0149902
                                                                                                                                                                                                99US-0149175
99US-0149426
                                                                                                             99US-0147302
                                                                                                                                                                                          990S-0149368
                                                                                                                                                                                                            99US-0149722
                                                         99US-0145918
                                                                                                                                                                                                                                                                                                                                                                                                                                14-0CT-1999;
14-0CT-1999;
14-0CT-1999;
                                                                                                                                                                                                                                                                                                                                       22 - JUL - 1999;
22 - JUL - 1999;
22 - JUL - 1999;
23 - JUL - 1999;
23 - JUL - 1999;
23 - JUL - 1999;
24 - JUL - 1999;
27 - JUL - 1999;
28 - JUL - 1999;
28 - JUL - 1999;
29 - JUL - 1999;
20 - AUG - 1999;
64 - AUG - 1999;
65 - AUG - 1999;
66 - AUG - 1999;
66 - AUG - 1999;
66 - AUG - 1999;
69 - AUG - 1999;
                                                                                                                                                                                                                                                                             AUG-1999;
AUG-1999;
SEP-1999;
                                                                                                                                                    -AUG-1999;
-AUG-1999;
                                                                                                                                                                 11-AUG-19
12-AUG-19
13-AUG-19
13-AUG-19
17-AUG-19
18-AUG-19
20-AUG-19
20-AUG-19
                                                                                                                                                                                                                                      23-AUG-1
25-AUG-1
26-AUG-1
                                                                                                                                                   99-
10-
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell interactions
                                                                                                                                                                                                                                   The invention relates to an isolated nucleic acid detection reagent
                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                               Drosophila melanogaster expressed polynucleotide SEQ ID NO 35936.
                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila; developmental biology; cell signalling; insecticide; pharmaceutical; gene; ss.
                                                                                                                                                                              ö.
                                                                                                                                                           Length 1464;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; SEQ ID NO 35936; 21pp + Sequence Listing; English.
                                                                                                                                                           Query Match
11.9%; Score 32.6; DB 21; Length 1
Best Local Similarity 51.7%; Pred. No. 2.9;
Matches 74; Conservative 0; Mismatches 69; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Myers EW;
                                                                                                                                                                                                                                                                                                                             RESULT 11
ABL13818/c
ID ABL13818 standard; cDNA; 18890 BP.
                                                                                                                                                                                                                                                                                             1186 cggaggettgaggtcagcaggtt 1208
                                                                                                                                                                                                                                                                            213 caggtagtaattgcatgcagttt 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          L1 PWD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-MAR-2001; 2001WO-US09231.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-MAR-2000; 2000US-191637P.
11-JUL-2000; 2000US-0614150.
                      990S-0160815.
990S-0160810.
990S-0160981.
990S-0160981.
990S-0161406.
990S-0161405.
990S-0161369.
990S-0161369.
990S-0161369.
990S-0161369.
990S-0161369.
                                                                                                                                                                                                                                                                                                                                                                                26-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Venter JC, Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-656860/75.
P-PSDB; ABB69715.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (PEKE ) PE CORP NY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200171042-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27-SEP-2001.
     21-0CT-1999;
21-0CT-1999;
22-0CT-1999;
22-0CT-1999;
25-0CT-1999;
25-0CT-1999;
26-0CT-1999;
26-0CT-1999;
26-0CT-1999;
28-0CT-1999;
28-0CT-1999;
28-0CT-1999;
                                                                                                                                                                                                                                                                                                                                                                  ABL13818;
                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                        ð
PR
```

```
ABL33894;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dene; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABL33894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                        ð
 555555555555555555555%%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The polynucleotide sequences given in AAC69597-C69644 encode the human secreted proteins given in AAB38522-B38569. Sequences given in AAB38572-B38550. Sequences given in AAB38570-B38647 represent alternative proteins encoded by the genes, and also represent proteins which are homologous to the gene products. The secreted proteins have activities based on the tissues in which they are expressed. Examples of the activities include immunosuppressive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; secreted protein; immunosuppressive; antiarthritic; antirheumatic; antippoliferative; cytostatic; cardiant; vasotropic; cerebroprotective; nootropic; neuroprotective; antibacterial; virucide; fundicide: opthalmalogical; autoimmune disease; hyperproliferative disorder; cardiovascular disorder; cerebrovascular disorder; infection; wound healing; cell proliferation; chemotaxis; food additive; ss.
                                                                                                                                                                                                                     ö
capable of detecting 1000 or more genes from Drosophila. The invention is useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention sequences (ABLIGI76-ABL30511), expressed DNA sequences (ABLIGI76-ABL30511), expressed DNA sequences data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                            112 ggctaccagacagtgttctcaacttggttaaggaagaaaacccagtcaatgaaattc 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Isolated nucleic acid molecule encoding a human secreted protein is used in preventing, treating or ameliorating a medical condition
                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                          Query Match
Best Local Similarity 60.9%; Pred. No. 7.8;
Matches 53; Conservative 0; Mismatches 34; Indels 0;
                                                                                                                                                    Sequence 18890 BP; 5574 A; 3742 C; 3763 G; 5811 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human secreted protein gene 20 SEQ ID NO:30.
                                                                                                                                                                                                                                                                                                                         2361 AATCACATTATTGCCAACTCCTTTTCA 2335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Komatsoulis G;
                                                                                                                                                                                                                                                                                                         172 aatgaaattcttggaaacttccattaa 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; Page 350; 436pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                     AAC69616 standard; cDNA; 878 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-MAR-2000; 2000WO-US06791.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-MAR-1999; 99US-0125815.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rosen CA, Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-579484/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P-PSDB; AAB38541.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200056882-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-SEP-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                     AAC69616;
                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                             AAC69616/
```

ò

ó

អ្គមួនមួនមួនមួនមួន**ន**ន្ត

```
antiarthritic; antirheumatic; antiproliferative; cytostatic; cardiant; cardianterial; virucide; fungicide; and opthalmalogical. The proteins, completed and/or agonists/antagonists are used to prevent, treat or plynucleotides and/or agonists/antagonists are used to prevent, treat or cardiovascular disorders e.g. neophasms of the rhematoid arthritis, hyperpoliferative disorders e.g. neophasms of the cerebrovascular disorders e.g. cardiac arrest, nervous cerebrovascular disorders e.g. cardiac arrest, or properties e.g. cardiac arrest, nervous cerebrovascular disorders e.g. cardiac arrest, nervous corpuses and ingland cardiac e.g. disease, infections caused by bacteria, system disorders e.g. corneal infection. The viruses and lungi and ocular disorders e.g. corneal infection. The viruses and iso be used to aid wound healing and epithelial cell colleration, to prevent skin aging due to sunburn, to maintain organs proliferation, to prevent skin aging due to sunburn, to maintain organs before transplantation, for supporting cell culture of primary tissues, before transplantation, for supporting cell culture of primary tissues, consequent tissues and in chemotaxis. The polypeptides can also be capabilities. Sequences in AAC69597-C69644 and AAB38521 are used during the isolation and characterisation of the genes of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nucleic acid comprising fragment of chemically modified gene, useful for diagnosis and treatment of diseases associated with abnormal cytosine methylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     153 aacccagtcaatgaaattcaatgaaattcttggaaacttccattaagtgtgtagattgag 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; inmune system disease; cytosine methylation; antiasthmatic; antiarteriosclerotic; antianaemic; cytostatic; nootropic; neuroprotective; anti-HTV; anticonvulsant; ophichalmological; antirhemmatic; antiarthritic; antialabetic; antipsoriatic; antinflammatory; cancer; eye disease; arteriosclerosis; anaemia; acute myeloid leukaemia; Alzheimer's disease; AIDS; epilepsy; neurofibromatosis; rheumatoid arthritis; psoriasis; bowel disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 31.8; DB 21; Length 878; Pred. No. 4.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      426 AAGATTATTTTCATCCAGCCTGAAATCAAATGCTATCCTAGATGA 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     213 caggtagtaattgcatgcagtttgtacattagtgcattaaaagatga 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 878 BP; 257 A; 166 C; 204 G; 251 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human immune system associated gene SEQ ID NO: 1867.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABL33894 standard; DNA; 6899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-JUN-2000; 2000DE-1032529.
01-SEP-2000; 2000DE-1043826.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-JUL-2001; 2001WO-EP07537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11.6%;
56.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 11.6%
Best Local Similarity 56.1%
Matches 60; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Olek A, Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2002-130909/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200200928-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-MAR-2002
```

```
ö
                          The present invention provides a number of human immune system associated genes which are modified by the methylation of cytosines. The sequences can be used in the diagnosis and treatment of immune system disorders, including eye diseases such as retinopathy, neovascular giaucoma and macular degeneration, arteriosclerosis, anaemia, cancer, acute myeloid leukaemia, Alzhelmer's disease, Alzhelmer's disease, Alzhelsis, psoriasis and inflammatory/ulcerative bowel diseases. The present sequence is a gene of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              canine; microsatellite; parentage testing; forensic test; breeding; dog; PCR; LCR; primer; genotype; genetic diversity; polymorphism; ds.
                                                                                                                                                                                                                                                                1772 agaggtggaggttgtagtgaatcgagattacgttattgtattttagtttggataatagag 1831
                                                                                                                                                                                                                                                                                                            Canine genotyping using micro-satellite length polymorphism - useful
                                                                                                                                                                                                                                                                                            147 gaagaaaacccagtcaatgaaattcaatgaaattcttggaaacttccattaagtgtgtag 206
                                                                                                                                                                                                                                        87 agaaggagaggttatacettcagggggctaccagacagtgttetcaaettggttaaggag 146
                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                 ö
                                                                                                                                                                                        Length 6899;
     Claim 1; SEQ ID NO 1867; 32pp + Sequence Listing; German.
                                                                                                                                                                                                                 Indels
                                                                                                                                                 Sequence 6899 BP; 1802 A; 79 C; 1686 G; 3332 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                          1892 agtgagtagtgtggttgggtaataggtttttattíttaagtat 1934
                                                                                                                                                                                                                                                                                                                                                  207 attgagcaggtagtaattgcatgcagtttgtacattagtgcat 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
"unique flanking sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "unique flanking sequence"
                                                                                                                                                                                     Score 31.8; DB 24;
Pred. No. 9.5;
0; Mismatches 82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stevenson T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
1..233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Canine genomic microsatellite DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_type= TANDEM
350..394
                                                                                                                                                                                                                                                                                                                                                                                                                                               BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96WO-US15556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95US-0004469
                                                                                                                                                                                           11.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                               AAT65070 standard; DNA; 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "u
234..349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Halverson J,
                                                                                                                                                                                                                    81; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1997-235910/21
                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (PEZO-) PE ZOGEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Key
misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9713876-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27-SEP-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-SEP-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-APR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dvorak J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         satellite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Canis sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAT65070;
                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                      AAT65070
                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                       ò
5
                                                                                                                                                                                                                                                                                                      å
                                                                                                                                                                                                                                                                                                                              g
```

```
Sequences AAX17801-X17820 represent microsatellite repeat sequences from loci of canine genotypes. The sequences can be used in a method for genotyping a canine, by PCR amplifying a region of chromosomal DNA with primers that specifically hybridise to a microsatellite locus, where the
                                                                                this canine genomic DNA sequence has internal microsatellite repeats that are flanked by unique flanking regions. The flanking sequences uniquely identify the microsatellite locus within the genome. This is used in a new method of genotyping a canine at a microsatellite locus, where the chromosomal DNA comprising a repeated motif is amplified with collonucleotide primers specific for the locus and size fractionating the product to measure chromosomal DNA size between the primers. Information from multiple loci could be used for distinguishing individuals, parentage testing and analysis of individuals' relatedness. It is also useful in improving breeding programmes and population diversity. A canine genome map could be constructed from analysis of many loci for morphology, behaviour and disease studies and maximising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Microsatellite repeat sequence; locus; canine; genotype; PCR; primer; amplification; chromosome; polymorphism; parentage testing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       147 gaagaaaacccagtcaatgaaattcaatgaaattcttggaaacttccattaagtgtgtag 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73 gtataaaaaacctgcctttgtaaatgtaagaaaatattgggtatatactttggatgaatgg 132
                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
distinguishing individuals, testing of parentage and analysis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Microsatellite repeat sequence from locus #7 of canine genotype.
                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                      Length 394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genotyping canines - by amplification of microsatellite DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                207 attgagcaggtagtaattgcatgcagtttgtacattagtgcattaaaaga 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            133 atggagaagaaacttatttatatagattttaaaagtgtaggattatggga 182
                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                  Sequence 394 BP; 96 A; 57 C; 47 G; 194 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                          49;
                                                                                                                                                                                                                                                                                                                                                                                        Score 31.6; DB 18;
Pred. No. 3.6;
                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 10; Column 19-20; 27pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stevenson
                                                           Claim 10; Page 26; 51pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP.
                                                                                                                                                                                                                                                                                                                                                                                        11.6%;
Local Similarity 55.5%;
hes 61; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     960S-0623906.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         960S-0623906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAX17807 standard; DNA; 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (PEKE ) PERKIN-ELMER CORP.
                                                                                                                                                                                                                                                                                                        species genetic diversity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dvorak J, Halverson J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     forensic testing; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-179968/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Canis familiaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US5874217-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-MAY-1999
                          relatedness
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAX17807;
                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15
                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

ő

```
cc region comprises: (a) a repeated tetranucleotide motif consisting of AAA or TTT and a fourth nucleotide; or (b) a repeated motif selected from cc AAAG, GAAA, AAAAA, TTTC, CTTT, TTTA, AAGG, GAAT, GAAGAA, AAAAAA, TGC and TTC. The amplification product is size-fractionated to provide a cc measure of the size of the compound DNA between the primers, where ct he size of the amplification product is polymorphic for the locus and cc provides a genotype for the canine. The combined information from cnitiple loci provides a means of distinguishing individuals, even among cc individual relatedness.

XX SQ Sequence 394 BP; 96 A; 57 C; 47 G; 194 T; 0 other;
```

Search completed: August 16, 2002, 13:45:32 Job time: 4208 sec

```
Human fetal liver, cDNA to mRNA, clones lambda-PDH[1,5,7 and F],
Human fetal liver, cDNA to mRNA, clones lambda-PDH[1,5,7 and F],
and leukocyte DNA, clones cPDH[3,4a].

SM Homo saptens
Eukaryota: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini: Hominidae; Homo.
Mammalia; Eutheria; Primates; Catarrhini: Hominidae; Homo.
The human pyruvate dehydrogense complex. Isolation of cDNA clones
for the El alpha subunit, sequence analysis, and characterization
of the mRNA
L J Biol. Chem. 262 (15), 7398-7403 (1987)

R 9722349

R 9722349

SE 2 (bases 1 to 14; 168 to 173)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HUMPDHA12

HUMAD Innear PRI 08-JAN-1995

Human nuclear-encoded mitochondrial pyruvate dehydrogenase El alpha
(pdhEl-a) subunit gene, exon 11.

M2727 J02734 M27166

M27257.1 GI:488487

dehydrogenase: nuclear-encoded mitochondrial EF-G-like protein;
pyruvate dehydrogenase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALISTA R. TATKUS MR U44125 RATKUS MOLV ACO15539 HOMO SAPI ACO15419 HOMO SAPI ACO16419 HOMO SAPI ACO74348 HOMO SAPI ACO74348 HOMO SAPI ACO79880 HOMO SAPI ALI37248 HUMAN DNA ACO71975 HOMO SAPI APO01217 HOMO SAPI APO01217 HOMO SAPI
                                                                                                                                                                                                                                                                                                                                                    AC106221 Rattus no M86808 Human pyruv AP002332 Homo sapi L20774 Sminthopsis x52990 S.domesticu S56181 El alpha -P M76728 Mouse pyruv AC101628 Mus muscu AC10152 Mus muscu AC10152 Mus muscu
M27257 Human nucle
M24848 Human pyruv
J03575 Human pyruv
J03503 Human pyruv
AX151747 Sequence
L13318 Human pyruv
AC02563 Homo sapi
X52709 Human mRNA
BC002406 Homo sapien
X52710 Human mRNA
G13505 Human mRNA
BC002406 Homo sapien
X52710 Human mRNA
G13505 human mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AP001220 Homo sapi
AC108674 Homo sapi
AC036109 Homo sapi
AC020636 Homo sapi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MUSPDHAZA
AC101628
AC100752
RRPDE1A2
                                                                                                                                                                                                                                                                  S57358
S81593
RRPDHYELA
MUSPDHALA
                                                                                                                                                                                                                                                                                                                                             BC007142
AC106221
HUMPYRDH
AP002332
AC093828
SMNPDHA
                                                                                                                                                                                         BC002406
HUMPDHA1G
HSPDHLE1
G13505
                                                      HUMPDHA
HUMPDHE1B
                                                                                           AX151747
HUMPUDE1A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AP001219
                                                                                                                                 HUMPDHAL
AC025563
HSPDHBE1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SDPDE1A
S56181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
                                                                                                                                                                                                                                                                                       33.0

25.3

24.7

24.7

24.7

24.0

24.0

24.0

24.0

115.5

24.0

115.5

24.0

115.5

117.5

24.0

117.9

23.3

117.9

17.5

24.0

17.5

24.0

17.5

17.5

17.5

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.9

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

16.8

                                                                                                                                                                           1427
1456
1492
                                                                      1446
1472
1472
17072
195191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14.0
                  100.0
100.0
100.0
100.0
100.0
100.0
98.9
                                                                                                                                                                                                                                                                                                                                                                                           65.4
65.4
65.4
63.6
63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47.8
47.8
47.8
46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42.2
                                                                                                                                                                                                                                                                                                                                     67.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 1
HUMPDHA12
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
MEDLINE
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEGMENT
                                                                                                                                                              ט ט
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O
                                                                                                                                                                    August 16, 2002, 11:46:41; Search time 1853.82 Seconds (without alignments) 3081.715 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                     1 ctaccacatctactccagcg.....agatgaattattgagtgctt 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                                                                                                                                                                                                                                                                                                                                                                             3595312
                                                      GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                         1797656 seqs, 10463268293 residues
                                                                                                                                                                                                                                                                                                                                                                                                                               tal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                    US-09-761-579-2_COPY_1200_1472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                       IDENTITY_NUC Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              htg_other: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 em_htgo_inv:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_htg_hum:*
em_htg_inv:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    em_hum:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     em_pat:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gb_sy:*
gb_un:*
gb_v1:*
em_ba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               em_fun:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             em_or:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_sts:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gb_ro:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       em_tn:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            em_om:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       em_ph:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         em_mu:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gb_pat:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gb_ba:*
gb_htg:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gb_om:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB &
Maximum DB &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database :
                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
9
                                                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                    Title:
```

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                          g
                                                                                                                                                ò
                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="private dehydrogenase E1-alpha subunit"
/product="private dehydrogenase E1-alpha subunit"
/product="private dehydrogenase E1-alpha subunit"
/db_xref="G18:30009"
/db_xref="G18:30009"
/db_xref="G18:30009"
/db_xref="G18:30009"
/db_xref="G18:30009"
/translation="MRKMLAAVSRVLSGASQKPASRVLVASRNFANDATFEIKKCDLH
RLEEGEPOTTPVTTREDGLKYTRAMMGYVRRMEKADOLTKGKRIFGECHLCOGGEACV
GLEAGINPTPHLITAXTREDGLYSVERILEGLGYGGGANGYGGSMHYYAKNF
YGGNGIVGAQVPLGAGIALACKYNGKDEVCLTLYGDGAANQGGIFEAYNMAALWKLPC
IFICENNRYGGMGTSVERAAASTDYRKRGDFIFGLGYHIYSSDPFERARYGRANDWIKFRANY
RGFILMELQTYRYHGHSMSDPGVSTRTEEIOGVRSKSDPIMLLKDRWVNSNLASVE
LKEIDVEVRREIEDAAOFTADPEPDLEELGYHIYSSDPFFRRGANOWIKFRSVS"
/doin/w20150.1:90. 60.M29150.1:90. 182, M29159.1:90. 117, 90. 170)
//dene="PDRAH"
//dene="PDRAH"/"/dene="PDRAH"/"/dene="PDRAH"/"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="PDRAH"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="pdrah"/dene="p
                                                                                                                                                                                                                                                                                                                                                                                           1. 367
/organism="Homo sapiens"
/db_xref="taxon:9066"
/db_xref="taxon:9066"
/cell_type="leokocyte"
/organism="Homo sapiens"
/organism="leokocyte"
/organis
Maragos, C., Hutchison, W.M., Hayasaka, K., Brown, G.K. and Dahl, H.H..
Structural organization of the gene for the El alpha subunit of the
human pyruvate dehydrogenase complex
J. Biol. Chem. 264 (21), 12294-12298 (1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                 121 acagigitcicaactiggitaaggaaggaagaaacccagicaaigaaattcaatgaaati 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product-"pyruvate dehydrogenase El-alpha subunit"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 367;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          107 a 62 c 99 g 99 t
About bp after segment 11; chromosome Xp22.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ouery Match
100.0%; Score 273; DB 9;
Best Local Similarity 100.0%; Pred. No. 2.1e-66;
Matches 273; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="G00-118-895"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="G00-118-895"
/number=10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="G00-118-895"
359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note-"G00-118-895"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="G00-118-895"
62 c 99 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="precursor"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <1. .8
/gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          342. .347
/gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /number-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            intron
    AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNT
                                                                                                                                                                           MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
```

```
/codon_start=1
/protein_id="AaA36533.1"
/db_xref="Gi:190762"
/db_xref="G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Draft entry and computer-readable sequence for [1] kindly submitted by M.S.Patel, 16-MAY-1989.

Location/Qualiflers
1. 1410
/organism="Homo saplens"
//db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0H 1410 bp mRNA linear PRI 27-APR-1993
pyruvate dehydrogenase alpha subunit mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1410)
1 (bases 1 to 1410)
1 (box 1... Wexler, I.D., Liu, T.-C., Thekkumkara, T.J. and Patel, M.S. Characterization of cDNAs encoding human pyruvate dehydrogenase alpha-subunit
Proc. Natl. Acad. Sci. U.S.A. 86, 5330-5334 (1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="pyruvate dehydrogenase alpha subunit precursor
1.2.4.1)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="pyruvate dehydrogenase alpha subunit signal
peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   131. .1213
/product="pyruvate dehydrogenase alpha subunit"
296 c 402 g 339 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 100.0%; Score 273; DB 9; Length 1410; Best Local Similarity 100.0%; Pred. No. 2e-66; Matches 273; Conservative 0; Mismatches 0; Indels 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   M24848.1 GI:190761
pyruvate dehydrogenase alpha subunit.
Human liver, CDNA to mRNA.
Homo sapiens
                                                                                                                                                                                                                                            .1216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unreported.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HUMPYDH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human p
M24848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
MEDLINE
                                    215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HUMPYDH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
```

```
1140 CTACCACTATCAGCGACCCACCTTTTGAAGTTCGTGGTGCCAATCAGTGGATCAA 1199
                                                                                                                            121 acagtgttctcaacttggttaaggaagaagaaacccagtcaatgaaattcaatgaaatt 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          128
                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                         RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                           g
                                                                                                               ò
                                                                                                                                             a
                                                                                                                                                                             ò
                                                                                                                                                                                                          g
                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                             1 (bases 1 to 1419)

Koike, K., Ohta, S., Urata, Y., Kagawa, Y. and Koike, M.
Cloning and sequencing of CDNAs encoding alpha and beta subunits of human pyruvate dehydrogenase
PPORC. Natl. Acad. Sci. U.S.A. 85 (1), 41-45 (1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LEGGENTYTTERCENTYRAMOTYRREENTADOLYNOK INGECHICOGOGACCO
GLEAGINPTDHLITAYRAHGFTFTRGLSVREILAELTGRKGGCAKGKGGSMHNYAKNF
YGNGIYGAQYPLGAGTALACKYNGKDEVCLTLYGDCAANQGOIFEXYNMAALWKLPC
IFICENNRYGMGYSVERAAGYDYYRKGBFIPGLRYDGMDILCYREATRFAAYCRSG
KGPILMELQYYRYHGENSDEGVSYRTREETOEVRSKSDPIMLLKDRHYNSNIASVEE
LKEIDVEVRKEIEDAAQFATADPEPPLEELGYHISSSDPFFEVRGANQMIKFKSVS"
                                                                                                                                                                HUMPDHA 1419 bp mRNA linear PRI 07-JAN-1995
Human pyruvate dehydrogenase alpha subunit mRNA, complete cds
J03575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        provided by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="MRKMLAAVSRVLSGASQKPASRVLVASRNFANDATFEIKKCDLH
                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 1419)
Koike, K., Urata, Y., Matsuo, S. and Koike, M.
Characterization and nucleotide sequence of human pyruvate dehydrogenase alpha subunit gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        [2] revises [1].
Draft entry and printed copy of sequence for [1] kindly pi
K.Koike, 11-APR-1988; and computer-readable copy for [2],
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /product-"pyruvate dehydrogenase alpha subunit"
/protein_id-"AAA60050.1"
/db_xref-"GI:189738"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product-"pyruvate dehydrogenase alpha subunit" a 297~\mathrm{c} 403 g 342 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 273; DB 9; Length 1419; 100.0%; Pred. No. 2e-66; Live 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                             pyruvate dehydrogenase.
Human foreskin fibroblast, cDNA to mRNA, clone pHPDA.
                                                                /organism="Homo maplens"
/db_xref="taxon:9606"
/cell_type="fibroblast"
/tissue_type="foreskin"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /EC_number="1.2.4.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <1. .1419
/gene="PDHA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .1419
/gene="PDHA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="PDHA"
133. .1215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene-"PDHA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="PDHA"
                                                                                                                                                                                                                              J03575.1 GI:189737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-MAR-1990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         273;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                            KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                         FERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                 HUMPDHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                  RESULT
                                   a
                                                                                                 셤
     õ
                                                                     ö
```

```
/note="pyruvate dehydrogenase E1-alpha precursor"
/codon_start=1
/bprotein_id="AAA60055.1"
/db_xref="G1:387011"
/db_xref="GB:300-118-895"
/translation="ETWGHPRRASWYVRSRRCRHCLCFMRKMLAAVSRVLSGASQKPA
SRVLVASRWFANDATFEIKKDLHRLEEGPPYTTVLTREDGLKYYRMMQTVRRMELRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DQLYKQKIIRGFCHLCDGQEACCVGLEAGINPTDHLITAYRAHGFTFTRGLSVREILA
ELTGRKGGCAKGKGGSMHWYAKNFYGGNGIVGAQVPLGAGIALACKYNGKDBVCLTLY
GDGANQGQIFEAYNMAALWKLDCIFICENNRYGGGTSLACKYNGKDBVCLTLY
RVDGANUGQIFEAYNMAALWKLDCIFICENNRYGGGTSVGRAASTDYKRGDFIPGL
RVDGADILCVREATRAAAVCRSKGPILMELQTYRYHGHSMSDPGYSYRTREBIQCY
RSKSDPIMLLKDRWYNSNLASVEELKEIDVEVRKEIEDPAQFAAADPEPPLEELGYHI
                                                                                                                                                                      PRI 07-JAN-1995 cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 1446)

De Meirleir, L., MacKay, N., Lam Hon Wah, A.M. and Robinson, B.H.

Isolation of a full-length complementary DNA coding for human Elpha subunit of the pyruvate dehydrogenase complex

J. Blol. Chem. 263 (4), 1991-1995 (1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="pyruvate dehydrogenase El-alpha signal peptide"
<1. 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clean copy of sequence [1] kindly provided by B.Robinson (03/08/88).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1446;
                                                                                                                                                                 помгинын 11near
Human pyruvate dehydrogenase El-alpha subunit mRNA,
J03503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product-"pyruvate dehydrogenase El-alpha"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                           pyruvate dehydrogenase.
Human hepatoma, cDNA to mRNA, clone lambda-gtll.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 273; DB 9;
100.0%; Pred. No. 2e-66;
Live 0; Mismatches 0;
346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .1440
/organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YSSDPPFEVRGANQWIKFKSVS'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a 307 c 414 g upstream of Nael site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene-"PDHA1"
73 .1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="PDHA1"
                                                                                                                                                                                                                                                      J03503.1 GI:189765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 100.
Best Local Similarity 100.
Matches 273; Conservative
                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88115327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           đ
```

ctaccacatctactccagcgacccaccttttgaagttcgtggtgccaatcagtggatcaa 60

ô

```
polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polyA_site
                                                                                                                                                                                                                                source
                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3'UTR
                DEFINITION
                                                                                                                                                                                                                                                                                            5'UTR
                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                           gene
                                          VERSION
KEYWORDS
SOURCE
HUMPUDE1A
                                   ACCESSION
                                                                                                                                              JOURNAL
                                                                                                                                                      MEDLINE
                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                     PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. [1 (bases 1 to 1472) Smith, J.C., Anand, R.A. and Morten, J.E. Method for the diagnosis of polymorphisms in the human pdh elalpha
                                                                              gtttaagtcagtcagttaagggggaggaggaggaggagggttataccttcagggggctaccag 120
                                           gtttaagtcagtcagttaaggggaggaggaggaggaggttataccttcagggggctaccag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 100.0%; Score 273; DB 6; Length 1472; Pest Local Similarity 100.0%; Pred. No. 2e-66; atches 273; Conservative 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                     DNA
                                                                                                                                                    350 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 ttagtgcattaaaagatgaattattgagtgctt 273
                                                                                                                                                                                                                                                                                                                                       Patent: EP 1118680-A 2 25-JUL-2001;
                                                                                                                                                                                                                 1472 bp
Sequence 2 from Patent EP1118680.
AX151747
AX151747.1 GI:14533675
                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo saplens"
/db_xref="taxon:9606"
314 c 427 g 350
                                                                                                                                                                                                                                                                                                                                                 AstraZeneca AB (SE)
Location/Qualifiers
                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                               ď
                                                                                                                                                                                                                                                                                                                                                                                              381
                                                                                                                                                                                                                                                                  human
                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1320
                         1167
                                                             1227
                                                                                                1287
                                                                                                                                   1347
                                                                                                                                                                        1407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                          61
                                                                              121
                                                                                                                  181
                                                                                                                                                                                                  AX151747
LOCUS
                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                   g
                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                        g
                                                           g
                                                                              ð
                                                                                               g
                                                                                                                 οy
                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
       ò
                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      å
```

9

RESULT

```
HUMAN DELA
HUMAN DYTUVATE dehydrogenase E1-alpha subunit (PDHAI) mRNA,
COMPLETE CAS.
L13318 J02734
L13318 J G1:292412
Pyruvate dehydrogenase; pyruvate dehydrogenase E1-alpha subunit.
HOMO sapiens fetus and adult liver CDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product="pyruvate dehydrogenase E1-alpha subunit"
/product="pyruvate dehydrogenase E1-alpha subunit"
/protein_id="AAA6027.1"
/db_xref="G1:292413"
/db_xref="G1:292413"
/db_xref="C1:292413"
/translation="MRKMLAAVSRVLSGASOKPASRVLVASRNFANDAFFEIKKCDLH
RLEEGPPVTTVLTREDGLKYYRMHOFVRRELKADQLYKOKIIRGFCHLCDCQGACCV
GLEAGINPTDHLITAYRKHGFYRPRGLSVREILAELTCRKGGGSHUMYARNF
YGGNGTVGAGTSVFRAHGFTFTRCLSVREILAELTCRKGGGSHUMYARNF
YGGNGTVGAGTSVFRAHGFTFTRCLSVREILAELTCRKGGGSHUMYARNF
YGGNGTVGAGTSVFRAHGFTFTRCLSVREILAELTCRFARAVCRSG
FKGFILMELGTYRYHGHSMSDPGVSYRTREELGEVRSKSDPIMLIKDRWNSNLASVEE
LKEIDVEVRKEIEDAAQFATADPEPPLEELGYHIYSSDPFFEVRGANQWIKFKSVS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 (sites)
Maragos,C., Hutchison,W.M., Hayasaka,K., Brown,G.K. and Dahl,H.H.
Structural organization of the gene for the El alpha subunit of the human pyruvate dehydrogenase complex
1. Biol. Chem. 264 (21), 12294-12298 (1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases I to 1472)
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'product="pyruvate dehydrogenase E1-alpha subunit"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /standard_name="pyruvate dehydrogenase complex"/BC_number="1.2.4.1"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /standard_name="pyruvate dehydrogenase complex"
/BC_number="1.2.4.1"
/note="600-118-895"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Biol. Chem. 262 (15), 7398-7403 (1987) 87222349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /tissue_type="liver"
/dev_stage="fetus and adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             350 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1. 1472
/organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   106. .192
/gene="PDHA1"
/note="G00-118-895"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="PDHA1"
/note="G00-118-895"
a 314 c 427 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="G00-118-895"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-"G00-118-895"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'note="G00-118-895"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       427 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 193. .1275
/gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .1472
/gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1276. .1472
/gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1, .105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
```

```
/translation='MRKMLAAVSRVLSGASOKPASRVLVASRNFANDATFEIKKCDLH
Kranslation='MRKMLAAVSRVLSGASOKPASRVLVASRNFANDATFEIKKCDLH
RLEEGPPVTYVLTREDLKYYRMOTVRRELETIGKRGGAKGKGGSHMYARNF
GLEAGINPTDHLITAYRAHGFTFFRGLSVREILGETIGKRGGAKGKGGSHMYARNF
GLGAGYVGAOVPLGAGTALAKGXYNGROBYLLLYGDGAANGGOIFERYNMALMAKLPC
IFICENNRYGMGTSVERAAASTDYYRRGDFIEGLRVDGMDILCVREATRFAAAYGRSG
IFICENNRYGMGTSVERAAASTDYYRRGDFIEGLRVDGMDILCVREATRFAAAYGRSG
KGPILMELGYTYRHGHSMSDPGVSYRTREEIGEVRGSSDPIMLLKDBMVNSNLASVEE
KGPILMELGYTYRHGHSMSDPGVSYRTREEIGEVRGSSPPFEVRGANOWIKFKSVS'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ctaccacatctactccagcgacccaccttttgaagttcgtggtgccaatcagtggatcaa 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 17072;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11/6/. 11944
//note="alpha subunit exon 7"
//note="alpha subunit intron 7"
//note="alpha subunit intron 7"
//note="alpha subunit exon 8"
//note="alpha subunit intron 8"
//note="alpha subunit intron 8"
//note="alpha subunit exon 9"
//note="alpha subunit exon 9"
//note="alpha subunit intron 10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
100.0%; Score 273; DB 9;
Best Local Similarity 100.0%; Pred. No. 1.8e-66;
Matches 273; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                    Anote-alpha subunit exon 2, 7001...530. 7004...531. 5900...5371. 5040...5371. 5040...5372...545. 5040...5372...545. 5040...5372...545. 5040...5372...5645...5996...537...5996...537...5996...5996...537...5996...5996...5996...5996...949...5996...949...5996...949...5996...949...5996...949...5996...949...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...9591...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...5996...59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="alpha subunit exon 11"
                                                                                                                                                                                                  620. .5840

/note="alpha subunit intron 1"

1818. .2129

/note="Alu repeat 1"

5192. .5479

/note="Alu repeat 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="alpha subunit exon 6"
11001. 11766
/note="alpha subunit intron 6"
11767. 11922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ų
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3957 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16221. .162.
3680 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polyA_signal
BASE COUNT 4377 a
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_unit
                                                                                                                                                                                                                                                            repeat_unit
                                                                                                                                                                                                                                                                                                         repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                               intron
                                                                                                                                                                                                                  Intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                               exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="alpha subunit exon 1" . 5545,7709. .7835,9500. .9591, 0101653. .619,5841. .5900,6372. .6545,7709. .7835,9500. .9591, 10908. .11000,1176. .11922,12107. .12178,14064. .14131, 15318. .15426,15888. .16052)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HUMPDHAL 11072 bp DNA linear PRI 01-FEB-2000 Human pyruvate dehydrogenase (EC 1.2.4.1) alpha subunit gene, exons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml; Eukaryota; Metazoa; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 17072)

1 (bases 1 to 17073)

1 (bases 1 to 17073)

1 (bases 1 to 17073)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rhese data kindly submitted in computer readable form by: Kichiko
                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Department of Pathological Blochemistry
Atomic Disease Institute Nagasaki University School of Medicine
12-4, Sakamoto-machi
Nagasaki-shi 852
                                                                                                                                                                                                                                                                                                                                                                                                                    D90084.1 GI:219981
pyruvate dehydrogenase; pyruvate dehydrogenase alpha subunit.
Human leukocyte DNA, clones pGPDHA[13 and 37].
Homo sapiens
                                                                               Gaps
                                                                                  ö
                          Length 1472;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       429. .434
439. .16253
/note="alpha subunit mRNA and introns"
                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp reported in [1] is linker sequence.
Location/Qualifiers
1. .17072
                                  100.0%; Score 273; DB 9;
100.0%; Pred. No. 2e-66;
Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /protein_id-"BAA14121.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bound_moiety-"SpI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          186. .291
Dound_moiety="Spi"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Phone: 0958-47-2111
Fax: 0958-47-8514
                                                                                       Best Local Similary
Matches 273; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATA_signal prim_transcript
                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          First 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein_bind
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAAT_signal protein_bind
                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
```

g

g

셤 à

ä

õ

셤

ð

a

ð

음

ð

```
Jp 1n
length
'n length
                                                                                                                                                                                                      P in
length
'n length
                                                                                                                   bp in length
                                                                                                                                                                                length
                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    in length
                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                       in length
                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                     in length
                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               unknown length
of 6587 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5174 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                              length
                                                                                                                                                                                                                                    ength
                                                                                   ength
                                                                                                         ength
                                                                                                                                                                                           length
                                                                                                                              ength
                                                                                                                                                                                                                                                                              ength
                                                                                                                                                                                                                                                                                                  ength
                                                                                                                                                                                                                                                                                                                         ength
                                                                                                                                                                                                                                                                                                                                            ength
                                                                                                                                                                                                                                                                                                                                                                 ength
                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                      ength
                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                      12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                           ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown lengt
of 10828 bp
                                                              unknown
of 1016
                                                                                                                                      of 2676
unknown
of 2424
                                                                                                                                                                              of 2312 h
unknown
of 2631 h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unknown of 3767 bunknown lof 4070 b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               unknown l
of 5519 b
unknown l
of 3898 b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown l
of 5845 r
                                                                                                                  of 1305
unknown
                                                                                                                                                                                                              unknown
of 2421
                                                                                                                                                                                                                                                                                                                                                                                   unknown
of 2992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unknown l
of 5827 b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown l
of 6736 b
                                                                                                                                                                                                                                                                                                                      unknown
of 4046
                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
of 3617
                               1156
                                                                                                                                                                                                                                             2492
                                                                                             1451
                                                                                                                                                                      unknown
                                                                                                                                                                                                                                    unknown
                                                                                                                                                                                                                                                         unknown
                                                                                                                                                                                                                                                                  3012
                                                                                                                                                                                                                                                                                                                                            unknown
                                                                                                                                                                                                                                                                                                                                                     3189
                                                                                                                                                                                                                                                                                                                                                                          2906
                                                                                                                                                                                                                                                                                                                                                                                                        unknown
                                                                                                                                                                                                                                                                                                                                                                                                                     4151
                                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
                                                                                                                                                                                                                                                                              unknown
                                                                                                                                                                                                                                                                                                 unknown
                                                                                                                                                                                                                                                                                                                                                                 unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 6538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of 8881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unknown
                                                                                             oę
                                                                                                                                                                                                                                                                                                                                                                                                                   ot
                                                                                                                                                                                                                                             of
                                                                                                                                                                                                                                                                  of
                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                        of
                                                                                                                                                                                                                                                                                                             ō
                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                         of
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ō
                             contig
gap of
contig
gap of
contig
gap of
                                                                                                                 contig
gap of
contig
gap of
contig
gap of
contig
                                                                                                                                                                                                            gap of
contig
gap of
contig
gap of
contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                 contig
gap of
contig
gap of
                                                                                                                                                                                                                                                                                                gap of
contig
gap of
                                                                                                                                                                                                                                                                                                                               contig
gap of
                                                                                                                                                                                                                                                                                                                                                     contig
gap of
                                                                                                                                                                                                                                                                                                                                                                        contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contig
gap of
contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                            contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig
gap of
contig
gap of
contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gap of
                                                                                                                                                                                                                                                                                                                                                                                                         gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   153918:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143090:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100115
                   1233
1333
22489
22589
4484
4584
4560
5700
7151
7251
8556
8656
                                                                                                                                                        11432
13856
13956
16268
16368
18999
19099
21520
                                                                                                                                                                                                                                                      24112
24212
27224
27324
30103
30203
33689
                                                                                                                                                                                                                                                                                                                                      37835
37935
41124
41224
                                                                                                                                                                                                                                                                                                                                                                                                                           51473
51573
55190
55290
58874
58974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62841
669111
72530
72630
76528
82473
82473
82573
87353
93180
                                                                                                                                                                                                                                                                                                                                                                                             44230
47222
47322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100016
                                                                                                                                                                                                                   Homo sapiens chromosome X clone RP11-723P2, WORKING DRAFT SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
Submitted (10.MAR-2000) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Park Parkway, St. Louis,
MO 63108, USA
On Jan 18, 2001 this sequence Version replaced g1:8469069.
                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 195191) Waterston, R.H.
                                                                                                        15974 CTACCACATCTACTCCAGCGACCCACCTTTTGAAGTTCGTGGTGCCAATCAGTGGATCAA 16033
                                 180
                                                                acagigiticicaactiggitaaggaggaagaaacccagicaaigaaattcaaigaaatt
                      gtttaagtcagtcagttaaggggaggaggaggagaggttataccttcagggggctaccag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOTE: This is a 'working draft' sequence. It currently consists of 41 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequencing vector: M13; 100%
Sequencing vector: plasmid; 0%
Chemistry: Dye-primer Er; 70% of reads
Chemistry: Dye-terminator B19 bye; 30% of reads
Chemistry: Dye-terminator B19 bye; 30% of reads
Assembly program: Phrap; version 0.990319
Consensus quality: 17319 bases at least Q40
Consensus quality: 179569 bases at least Q30
Insert size: 178000; agarose-fp
Insert size: 191191; sun-of-contigs
Quality coverage: 3.17 in Q20 bases; sum-of-contigs
Quality coverage: 3.65 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Center: Washington University Genome Sequencing Center
Center code: WUGSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /genome.wustl.edu/gsc/index.shtml
                                                                                                                                                 Contact: submissions@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                   The sequence of Homo sapiens clone Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----- Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----- Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center project name: H_NH0723P02
                                                                                                                                                                                                                                                         AC025563
AC025563.3 GI:12280935
HTG; HTGS_PHASE1; HTGS_DRAFT.
                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 195191)
                                                                                                                                                                                                                                                                                                                                                                                       Waterston, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                site:http:
                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center
Web sit
                                                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                      61
                                                               121
                                                                                                                                                                                                                                   LEFINITION
                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                 125563
                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                      RESULT
```

ö

Indels

Length 195191;

```
Human mRNA for brain pyruvate dehydrogenase (EC 1.2.4.1).
X52709
X52709 1 GI:35378
pyruvate dehydrogenase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1427)
                                                                                                                                                                                                                                                         Direct Submission

Submitted (18-APR-1990) Song B.J., National Institute on Alcohol
Submitted (18-APR-1990) Song B.J., Netabolism and Molecular
Abuse and Alcoholism, Laboratory of Metabolism and Molecular
Biology, 12501 Washington Ave., Rockville, MD 20852, USA
2 (bases 1 to 1427)
Huh, T.L., Chi, Y.T., Casazza, J.P., Veech, R.L. and Song, B.J.
                                                                                                                                            Data kindy reviewed (05-NOV-1990) by Song B.J.
Location/Qualifiers
1. .1427
/organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="xpter-q13."
/clone_lib="brain in lambda gill."
/55. .1227
                                   Query Match 100.0%; Score 273; DB 2;
Best Local Similarity 100.0%; Pred. No. 1.5e-66;
Matches 273; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                      Score 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               405 g
vector_side:right"
87353. .93179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Song, B.J
                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                            Query Match
Best Local Si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
JOURNAL
COMMENT
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
HSPDHBE1
               154018: gap of unknown length
164642: contig of 10624 bp in length
164742: gap of unknown length
173056: contig of 8314 bp in length
173156: gap of unknown length
18286: contig of 9430 bp in length
18568: gap of unknown length
195191: contig of 12505 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                           14936. ..13033

10956. ..16267

1010e="assembly_name:Contig34"

16368. .18998

/note="assembly_name:Contig35"

19099. .13159

/note="assembly_name:Contig36"

21620. .24111

24212. .2723

/note="assembly_name:Contig38"

27324. .30102

/note="assembly_name:Contig38"

27324. .30102

/note="assembly_name:Contig39"

/note="assembly_name:Contig40"

3789. .37894

/note="assembly_name:Contig40"

37935. .41123

/note="assembly_name:Contig41"

77322. .51472

/note="assembly_name:Contig44"

47322. .51472

/note="assembly_name:Contig44"

77322. .51472

/note="assembly_name:Contig44"

77322. .51472

/note="assembly_name:Contig46"

55290. .58873

/note="assembly_name:Contig46"

56874. .62740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62841. .66910
/note-"assembly_name:Contig49"
67011. .72529
/note-"assembly_name:Contig50"
72630. .76527
/note-"assembly_name:Contig51"
                                                                                                                                                                                                                                                                            7.589. 4483
7.00te-massembly_name:Contig27"
4584. 5599
7.00te-massembly_name:Contig28"
5700. 7150
7251. 8555
7251. 8556
700te-massembly_name:Contig31"
8656. 11331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      76628. .82472
/note="assembly_name:Cont1952"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82573. .87252
/note-assembly_name:Cont1953
clone_end:SP6
                                                                                                                                                                                                                               /note="assembly_name:Contig20"
1333. .2488
/note="assembly_name:Contig23"
2589. .4483
                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="X"
/clone="RP11-723P2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone_end:T7
vector_side:right"
                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                         11432. .13855
                        153919
154019
164643
164743
173057
173157
182587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                        source
                                                                                                                                             FEATURES
```

Length 1427;

DB 9;

```
JOSO 11200

JOSO 1220

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1492)
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Collins, F., Cartwright, P., Hoogenraad, N., Thorburn, D.R., Takakubo, F., Cartwright, P., Hoogenraad, N., Thorburn, D.R., Collins, F., Lithgow, T. and Dahl, H.H.
An amino acid substitution in the pyruvate dehydrogenase El alpha An amino acid substitution in the pyruvate dehydrogenase El alpha An amino acid substitution in the pyruvate dehydrogenase El alpha An J. Hum. Genet. 57 (4), 772-780 (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   омагинать - 1492 bp mRNA linear PRI 15-AUG.
Homo sapiens pyruvate dehydrogenase El-alpha subunit precursor
(PDHAL) mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1456;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
/tissue_type="Muscle, rhabdomyosarcoma"
/clone_lib="NIH_MGC_17"
/lab_host="DH10B-R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 98.9%; Score 270; DB 9; I Best Local Similarity 100.0%; Pred. No. 1.4e-65; Matches 270; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hum. Mutat. 1 (2), 97-102 (1992)
93244853
                                                                                                          /note="Vector: pOTB7"
58. .1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   L48690.1 GI:1051096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 L48690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HUMPDHA1G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Web site: http://www.nisc.nih.gov/
Contact: nisc_mgcehqfi.nih.gov/
Contact: hts_mgcehqfi.nih.gov/
Shevchenko,Y., Wetherby,K.D., Beckstrom-Sternberg,S.M.,
Benjamin,B., Blakesley,R.W., Bouffard,G.G., Brinkley,C., Legaspi,R.,
Dietrich,N.L., Guan,X., Gupta,J., Ho,S.-L., Karlins,E., Legaspi,R.,
Lim,M., Maduro,O.L., Masiello,C., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Snyder,B., Stantripop,S., Thomas,P.J.,
Tiongson,E.E., Touchman,J.W., Tsurgeon,C., Vogt,J.L., Walker,M.A.,
Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        be found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BC002406 1456 bp mRNA linear PRI 12-JUL-2001
Homo saplens, pyruvate dehydrogenase (lipoamide) alpha 1, clone
MGC:8609 IMAGE:2961286, mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         clone distribution: MGC clone distribution information can be foun through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov series: IRAL Plate: 1 Row: 1 Column: 24 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 4505684.
                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1456)
Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
Submitted (05.FEB-2001) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                               NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-remail.nih.gov
Tissue Procurement: ATCC
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: The I.M.A.G.E. Consortium (LLNL)
Sequencing Center (NISC).
Gatthersburg, Maryland:
Meb site:
http://www.nisc.nih.gov/
                                                                                    Gaps
                                                                                    ;
                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="LocusID:5160"
/db_xref="taxon:9606"
/clone="MGC:8609 IMAGE:2961286"
                                                      Local Similarity 100.0%; Pred. No. 1.4e-65; nes 270; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BC002406
BC002406.1 GI:12803198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                            Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 1
BC002406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
```

셤 ç

g ò q à

g ö

ŏ

```
STS 04-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                           /db_xref="SWISS-"FROT: P08559"
/db_xref="SWISS-"FROT: P08559"
/translation="NRKMLAAVSRVLSGASGKPASRVLVASRNFANDATFEIKKCDLH
/translation="NRKMLAAVSRVLSGASGKPASRVLVASRNFANDATFEIKKCDLH
/translation="NRKMLAANSRVLSGASGKGGSKGGSKHWARKEC
GLEAGINFTDHLITAYRAHGFTFTRGLSVRBILAELTGRKGGGSKKGGSKHWARKEC
GGROIVGAQYPLGAGAIALACKYNGKDEVCLTLYGDGAANGGGIFEAYNMAALWKLPC
IFICENNRYCHGTSVBRAAASTDYYKRGDETFGLKVTGWDILCVRRATFAAAVCRSG
RGPILAELQYYRHGHSWASDFGVRYRTREBIQEVRSKSDPTMLLKORWVNSNLASVEB
RGPILAELQYYRHGHSWASPFARELGGYHTYSSDPPFEVRGANOWIKFKSVS"
302 c 404 g 338 t
                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1417)

1 (bases 1 to 1417)

Song, B.J.

Direct Submission

Submitted (18-APR-1990) Song B.J., National Institute on Alcohol Submitted (18-APR-1990) Song B.J., National Institute on Alcohol Submitted (18-APR-1990) Song B.J., National Institute on Alcohol Subsea and Alcoholism, Laboratory of Metabolism and Molecular Biology, 12501 Washington Ave., Rockville, MD 20852, USA

2 (bases 1 to 1417)

2 (bases 1 to 1417)

Chaptelished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="pyruvate dehydrogenase E1' subunit (AA 1 - 390)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             613505 201 bp DNA linea human STS SHGC-10981, sequence tagged site. 613505. GI:1129244 squence tagged site. 55TS; STS sequence; primer; sequence tagged site.
                                                                                                                                                                                               Data kindly reviewed (05-NOV-1990) by Song B.J.
Location/Qualifiers
1. 1417
                                                                                                                                                                                                                                                                       /chromosome="Xpter-q13."
/clone_lib="liver in lambda gtll."
57. .1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97.8%; Score 267; DB 9; L6
illarity 100.0%; Pred. No. 9.6e-65;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                    /protein_id="CAA36934.1"
/db_xref="GI:35381"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
pyruvate dehydrogenase.
human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Simi:
Matches 267; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                   ORGANISM
                                                                                                                                                                                 AUTHORS
                                                                                            AUTHORS
TITLE
                                                                                                                                                                   REFERENCE
                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
G13505
LOCUS
   KEYWORDS
SOURCE
                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      · 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSPDHLE1 14.17 bp mRNA linear PRI 12-SEP-1993 Human mRNA for liver pyruvate dehydrogenase (EC 1.2.4.1) E1' subunit.
                                                                                                                                                                                                                                                                                                      RLEEGPPVTTVLTREDGLKYYRMDGTVRRMELKADGLKYGKTIRGFCHLCDGGEACCV
GLERASTPOTISSOPTGLTALLSPGAFPSEKFSGSLQDEKEVVLKGKEDRCTCMPRTS
TGAMASWERRCPWAAGIALGKYNGROPCLTLTYGDGAANGQOIFEAYNMAALWKLPC
TIFLCBNNRYGMGTSVERAAASTDYKRGDFTPGLRYDGMDILCYREATRFAARYCRSG
KGPILMELQYYRYLGHEBMSDPGVSTRTREEIOEVRSKSDPIMLLKDRWYNSNLASVEE
LKEIDVEVRKEIEDAAQFATADPEPPLEELGYHIYSSDPPFEVRGANOWIKFKSVS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                           /db_xref="GI:1051097"
/translation-"MRKMLAAVSPVLSGASGKPASRVLVASRNFANDATFEIKKCDLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene-"PDHA1"
/note-"results in arginine to proline substitution"
/replace-"g"
193. .1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    //Jr. 1275
/gene="PDHA1"
/note="G00-118-895"
prode="G00-118-895"
/prode="G00-118-895"
a 317 c 424 g 349 t
                                                                                                                                                                                                              /codon_start-1/product-"pyruvate dehydrogenase El-alpha subunit
precursor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1492;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 268.2; DB 9;
Pred. No. 4.4e-65;
0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /cell_type="fibroblast"
/tissue_type="skin"
/dev_stage="ten month old"
                                                                                                                                                                                                                                                                   /protein_id="AAB59581.1"
                                                         /organism="Homo sapiens"/isolate="920002"
                                                                                      /db_xref="taxon:9606"
                              Location/Qualifiers
                                                                                                                                                                                            106. .1278
/gene-"PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                         106. .192
/gene="PDHA1"
                                                                                                                                                                            /gene="PDHA1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 98.2%;
Best Local Similarity 98.9%;
Matches 270; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X52710
X52710.1 GI:35380
                                                                                                         /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      402
                    7573035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                         sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                    variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSPDHLE1
                                                                                                                                                                       gene
                    PUBMED
                                                                                                                                                                                                   CDS
                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

REFERENCE AUTHORS JOURNAL

COMMENT

```
149 bp mRNA linear PRI 03-AUG-1996 pyruvate dehydrogenase complex alpha subunit (exon 11) [human, female pyruvate dehydrogenase deficiency patient, skin fibroblasts, mRNA Partial Mutant, 149 nt).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ä
129 bp mRNA linear PRI 28-JUN-1993
pyruvate dehydrogenase alpha subunit [3'region] [human, mRNA
Partial Mutant, 129 nt].
S57358.1 GI:298967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="pyruvate dehydrogenase alpha subunit, El alpha"
/dene="pyruvate dehydrogenase alpha subunit"
/codon_start=1
/product="pyruvate dehydrogenase alpha subunit"
/db_xref="dia"aAB26018.1"
/db_xref="dia"aAB26018.1"
/db_xref="dia"aNdWIKFKSVKGRRRRGYTFRGLPDSVLNLVKEEENPVNEIQ"
/translation="ANOWIKFKSVKGRRRRGYTFRGLPDSVLNLVKEEENPVNEIQ"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             patient.

Mathochondrion Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

I (bases 1 to 149)

Ito,M., Naito,E., Yokota,I., Takeda,E., Matsuda,J., Hirose,M.,

Sejima,H., Alba,H., Hojo,H. and Kuroda,Y.
                                                                                                                                                                Homo sepiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Eukaryota; Metazoa; Pinmates; Catarrhini; Hominidae; Homo.
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 129)
Marisawa,K., Endo,H., Miyabayashi,S. and Tada,K.
Thiamine responsive pyruvate dehydrogenase deficiency
J. Nutr. Sci. Vitaminol. Spec No, 585-588 (1992)
J. Nutr. Sci. Vitaminol. Spec No, 685-588 (1992)
1297818
GenBank staff at the National Library of Medicine created this entry (NBU gibbsq 128596) from the original journal article.
This sequence comes from Fig. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human skin fibroblasts female pyruvate dehydrogenase deficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene-"pyruvate dehydrogenase alpha subunit, El alpha"
1. 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 42.1%; Score 115; DB 9; Length 129; Best Local Similarity 97.0%; Pred. No. 6.3e-22; Matches 129; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                    1. .129
/organism="Homo sapiens"
/db_xref="taxon:9606"
1. .129
/partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S81593.1 GI:1478429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         117 TGAAATTCAATGA 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       164 tgaaattcaatga 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44
                                                                                                                                                      human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
S81593
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                       VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
MEDLINE
PUBMED
REMARK
                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Prepared with primer pairs derived from D90084 -- Unigene. Location/Qualifiers
                                                    Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 201) Myers, R.W. Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                    seconds
                                                                                                                                                                                                                                                                                                                                                  Initial incubation: 94 degrees C for 90 seconds
                                                                                                                                                                                                                                                                                                                                                                                    seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Juery Match 71.1%; Score 194; DB 11; Length 201; Best Local Similarity 100.0%; Pred. No. 3.6e-44; Matches 194; Conservative 0; Mismatches 0; Indels
                                                                                                                                                             Stanford Human Genome Center (SHGC)
Stanford Human Genome Genome Genome Genome Genome Genome Genetics, M-344, Stanford, CA 94305, USA
Tel: 4157259687
Fax: 4157259689
                                                                                                                                                                                                                                                                                                                                                                                94 degrees C for 15 s 62 degrees C for 23 s 72 degrees C for 30 s 30 perkin Elmer 9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25 ng
each 1 uM
each 200 uM
0.05 units/ul
10 ul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. 201
/crganism-"Homo sapiens"
/db_xref-"taxon:9606"
/map-"x"
7. 31
                                                                                                                                                                                                                                                                                  Primer A: GAGAAGGAGAGGTTATACCTTCAGG
Primer B: TCATTGAATTCATTGACTGGG.
STS 81ze: 91
PCR Profile:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.5 mM
50 mM
20 mM
                                                                                                                                                                                                                                                       Email: myers@shgc.stanford.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(76..97)
1 25 c 53 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8.3
                                                                                                                                                         Contact: Richard M. Myers
                                                                                                                                                                                                                                                                                                                                                                                                               Annealing:
Polymerization:
PCR Cycles:
Thermal Cycler:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Taq Polymerase:
Total Vol:
                                                                                                                                                                                                                                                                                                                                                                                             Denaturation:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   260 attattgagtgctt 273
|||||||||||||||||
181 ATTATTGAGTGCTT 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KCl:
Tris-HCl:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Template:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MqC12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protocol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Buffer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               primer_bind
primer_bind
BASE COUNT 6
```

FEATURES

7

RESULT S57358

셤

ò g å

ð g 셤

å

```
Molecular genetic analysis of a female patient with pyruvate deliciency: detection of a new mutation and delydrogenase deficiency: detection of a new mutation and delydrogenase deficiency: detection of a new mutation and deliferential expression of mutant gene product in cultured cells differential bis. 18 (5), 547-557 (1995)

**Mather the National Library of Medicine created this generate comes from Fig. 4.

**Mathors actually 176891] from the original journal article.

**Authors note 18 bp insertion at nt 1078.**

**Authors note 18 bp insertion at nt 1078.**

**Location/Qualifiers**

**Authors note 18 bp insertion at nt 1078.**

**Authors note 18 bp insertion at nt 1078.**

**Coganism="Homo sapiens"

**Authors note 18 bp insertion at nt 1078.**

**In 149

**Authors note 18 bp insertion at nt 1078.**

**Authors note 18 bp insertion at nt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="FATADPEPPLEDEPPLEELGYHIYSSDPPFEVRGANOMIKFKSV
S"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene-"pyruvate dehydrogenase complex alpha subunit, PDHC,
El alpha"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene-"pyruvate dehydrogenase complex alpha subunit, PDHC,
El alpha"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product-"pyruvate dehydrogenase complex alpha subunit"
/protein_id-"AAB36217.1"
/db_xref-"G1:1478430"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33.0%; Score 90; DB 9; Length 149; illarity 100.0%; Pred. No. 6.8e-15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120 GITTAAGTCAGTCAGTTAAGGGAGGAGAA 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 gtttaagtcagtcagttaaggggaggagaa 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jearch completed: August 16, 2002, 13:40:31 Job time: 6830 sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 37 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 90; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                   JOURNAL
MEDLINE
REMARK
                                                                                                                                                                                                                                                                                                                                                        COMMENT
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
```